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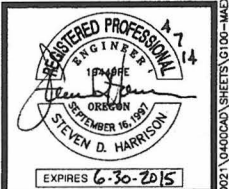


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CITY OF MILWAUKIE	DEPARTMENT	SIGNATURE	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
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PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	SHEET INDEX

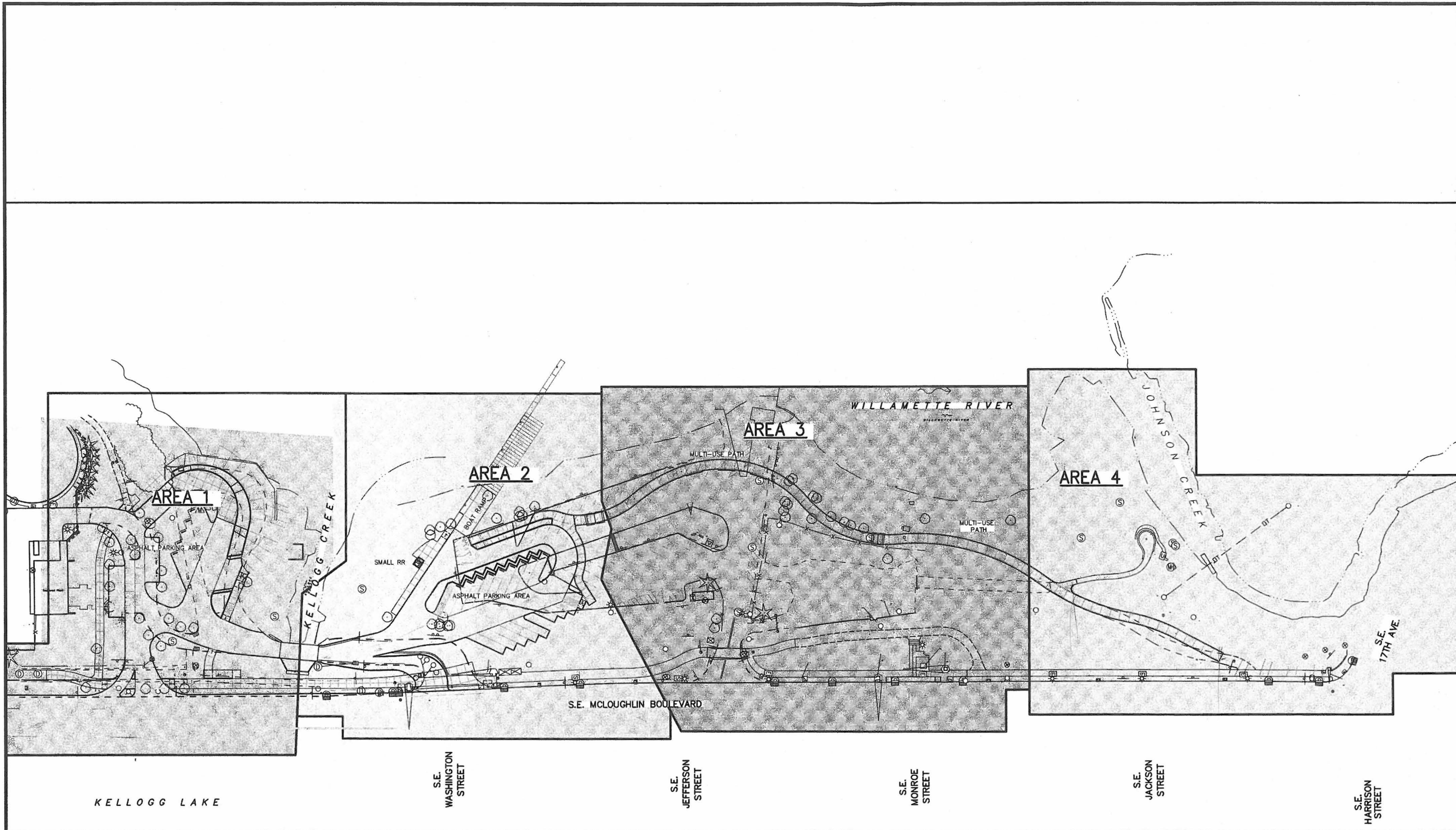
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SHEET TITLE	SITE MAP

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MILWAUKIE RIVERFRONT PARK - CIVIL ENGINEERING - GENERAL INFORMATION



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GENERAL DEMOLITION NOTES

1. THE PURPOSE OF THE DEMOLITION DRAWINGS IS TO OUTLINE A GENERAL DIRECTION OF WHAT NEEDS TO BE REMOVED TO ACCOMPLISH THE NEW WORK. THE WORK SHOWN IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO BE ALL-INCLUSIVE.
2. THE SCOPE OF WORK INDICATED ON THE DEMOLITION PLANS DOES NOT RELIEVE THE CONTRACTOR FROM OTHER DEMOLITION WORK REQUIRED TO PRODUCE THE SITEWORK SHOWN IN THE CONSTRUCTION DOCUMENTS. REFER TO CIVIL, STRUCTURAL, MECHANICAL, PLUMBING FIRE PROTECTION, ELECTRICAL AND OTHER CONSULTANT DOCUMENTS FOR ADDITIONAL INFORMATION AND INSTRUCTIONS. THE CONTRACTOR IS TO VERIFY EXISTING CONDITIONS, AND INCLUDE ALL WORK NECESSARY TO ACHIEVE THE DESIRED RESULTS INDICATED ON THE DOCUMENTATION FOR THE FINISHED PROJECT.
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND LICENSES AS REQUIRED BY LOCAL, COUNTY OR STATE ORDINANCES AND BEAR ALL COSTS.
4. NOTIFY THE ENGINEER IN ADVANCE OF EXCAVATION, CUTTING OR ALTERATION WHICH MAY AFFECT THE STRUCTURAL SAFETY OR OPERATION OF ANY PORTION OF THE INFRASTRUCTURE TO REMAIN.
5. PROTECT THE EXISTING STRUCTURE DURING CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION OR REMOVAL OF STRUCTURES WHICH ARE PART OF THE WORK.
6. CONTRACTOR DEMOLISHED AND REMOVED ITEMS ARE TO BE DISPOSED OF PROPERLY OFF-SITE AND IN AN EXPEDITIOUS MANNER.
7. USE CARE TO MINIMIZE DAMAGE TO EXISTING ELEMENTS WHICH ARE TO REMAIN. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR, PATCHING, REPAINTING, OR REPLACEMENT OF ANY FACILITIES IN AREAS AFFECTED, MODIFIED OR DAMAGED BY THIS WORK.
8. ALL ABANDONED UTILITIES ARE TO HAVE CONDUITS OR PIPING REMOVED OR CAPPED OFF IN CONCEALED SPACES AS REQUIRED FOR OPERATION OF THE SYSTEM.
9. CONSULT APPROPRIATE MAINTENANCE STAFF AND REFER TO EXISTING DESIGN DOCUMENTS PRIOR TO REMOVAL OF ELECTRICAL ELEMENTS.
10. CONSTRUCT APPROVED PERIMETER FENCING AT LIMITS OF DEMOLITION.
11. DEMOLISH AND COMPLETELY REMOVE ALL SITE IMPROVEMENTS SHOWN WITHIN THE "LIMITS OF DEMOLITION" AREA INDICATED ON THE SITE DEMOLITION PLAN EXCEPT AS NOTED ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.
12. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREET AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.

GENERAL UTILITY NOTES

1. CONTRACTOR TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES. NOTIFY ENGINEER OF ALL DISCREPANCIES.
2. MATERIALS, TRENCH EXCAVATION, PIPE LAYING AND BACKFILL EXCAVATIONS SHALL MEET THE REQUIREMENTS OF THE STANDARD CONSTRUCTION SPECIFICATIONS OF THE OREGON CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA), LATEST EDITION, DIVISION 2.
3. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR TO COMPLETE THE WORK FOR THE WATER DISTRIBUTION AND FIRE PROTECTION SYSTEM AT THE LOCATIONS, SIZES AND TYPES AS SHOWN ON THE PLANS. THESE SYSTEMS SHALL BE LAID IN TRUE ALIGNMENT IN A DRY PIPE TRENCH "BEDDED" TO THE DETAIL SHOWN ON THE PLANS.
4. COPPER PIPE AND FITTINGS SHALL CONFORM TO ASTM B88, TYPE K. COPPER FITTINGS SHALL BE WROUGHT-COPPER MEETING ASME B16.22. MINIMUM COVER SHALL BE 30" UNLESS OTHERWISE NOTED.
5. GATE VALVES 8" AND SMALLER SHALL CONFORM TO AWWA C500 AND SHALL BE DUCTILE IRON, RESILIENT SEAT TYPE WITH MECHANICAL JOINTS. VALVES SHALL BE DESIGNED WITH A MINIMUM WORKING PRESSURE OF 200 PSI. EACH VALVE SHALL HAVE THE VALVE TYPE, SIZE, RATING AND MANUFACTURER CAST INTO THE BODY.
6. ALL PRESSURE AND LEAKAGE TESTING SHALL CONFORM TO AWWA SPECIFICATIONS.
7. ALL WATER MAIN CROSSINGS SHALL CONFORM TO THE OREGON STATE HEALTH DEPARTMENT, CHAPTER 333. WATER MAINS SHALL CROSS OVER SANITARY SEWERS WITH A 18" MINIMUM CLEARANCE BETWEEN OUTSIDE DIAMETERS OF PIPE WITH ALL PIPE JOINTS EQUIDISTANT FROM CROSSING. HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWERS IN PARALLEL INSTALLATIONS SHALL BE 10'. MAINTAIN 12" MINIMUM VERTICAL DISTANCE FOR ALL OTHER UTILITY CROSSINGS AND 12" HORIZONTAL PARALLEL DISTANCE. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN THE MINIMUM 10' HORIZONTAL SEPARATION, THE WATER MAIN SHALL BE LAID ON A SEPARATE SHELF IN THE TRENCH 18" ABOVE THE SEWER.
8. ALL WATER LINES SHALL BE THOROUGHLY FLUSHED, CHLORINATED AND TESTED IN ACCORDANCE WITH THE OREGON STATE HEALTH DEPARTMENT AND AWWA C651 THROUGH C654.
9. POLYVINYL CHLORIDE (P.V.C.) PIPE AND FITTINGS SHALL CONFORM TO ASTM D3034 SDR 35. THE JOINTS SHALL BE FLEXIBLE WITH ELASTOMERIC SEALS CONFORMING TO ASTM D-3212 AND ASTM F477. CONTRACTOR SHALL PROVIDE FITTINGS AND TRANSITION COUPLINGS COMPATIBLE WITH NEW AND EXISTING STORM PIPING AS NECESSARY.
10. PRIOR TO FINAL INSPECTION OF THE SANITARY SEWER SYSTEM, THE CONTRACTOR SHALL CLEAN AND FLUSH ALL PARTS OF THE SYSTEM. ALL ACCUMULATED MATERIAL SHALL BE REMOVED FROM THE CLOSEST DOWNSTREAM MANHOLE. VELOCITY IN THE PIPE DURING FLUSHING SHALL BE AT LEAST 2.5 FPS.
11. VISUAL INSPECTION SHALL BE PERFORMED AFTER COMPLETION OF MANHOLES AND COMPACTION EFFORTS, BUT PRIOR TO PAVING. A FULL PIPE DIAMETER SHALL BE VISIBLE BETWEEN ALL MANHOLES. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY PORTION THAT DOES NOT MEET THE SPECIFICATIONS AT HIS OWN EXPENSE.
12. ACTUAL LINES AND GRADES SHALL BE STAKED BY QUALIFIED SURVEYOR, BASED ON DIMENSIONS AND BEARINGS AS SHOWN ON THE PLANS. CONTRACTOR SHALL RETAIN A LICENSED SURVEYOR IN THE STATE OF OREGON.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND DISPOSAL OF EXISTING SITE ELEMENTS IDENTIFIED WITHIN THE SITE AREA. ALL LANDSCAPING, A.C. DAMAGED BY CONTRACTOR SHALL BE REPLACED TO THEIR ORIGINAL CONDITION OR BETTER, UNLESS OTHERWISE NOTED.
14. SUBGRADE AND TRENCH BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698. FLOODING OR JETTING THE BACKFILLED TRENCHES WITH WATER IS NOT PERMITTED.
15. CONNECTIONS TO EXISTING UTILITIES SHALL CONFORM WITH THE STANDARD SPECIFICATIONS OF OREGON CHAPTER APWA, SECTION 208, "WORK ON EXISTING SEWERS AND STRUCTURES".
16. ADJUST ALL INCIDENTAL STRUCTURES, MANHOLE LIDS, VALVE BOXES, ETC. TO FINISHED GRADE.

ABBREVIATIONS

AB	AGGREGATE BASE	N	NORTH
AC	ASPHALTIC CONCRETE	NOM	NOMINAL
AH	AHEAD	NTS	NOT TO SCALE
AV	AIR VAC. RELEASE VALVE	OC	ON CENTER
BC	BEGIN CURVE	PA	PLANTER AREA
BVCE	BEGIN VERTICAL CURVE ELEVATION	PL	PROPERTY LINE
BVCS	BEGIN VERTICAL CURVE STATION	PCC	POINT OF COMPOUND CURVATURE
BD	BOUNDARY	PCC	PORTLAND CEMENT CONCRETE
EVCE	END VERTICAL CURVE ELEVATION	PP	POWER POLE
EVCS	END VERTICAL CURVE STATION	PRC	POINT OF REVERS CURVATURE
BK	BACK	PT	POINT OF TANGENCY
CL	CENTER LINE	PVC	POLYVINYL CHLORIDE PIPE
CJ	CONTROL JOINT	PI	POINT OF VERTICAL INTERSECTION
CSP	CORRUGATED STEEL PIPE	(R)	RADIAL, RECORD
DEA	DAVID EVANS & ASSOCIATES	R	RADIUS
DW	DOMESTIC WATER	RCP	REINFORCED CONCRETE PIPE
E	EAST, EXPOSURE	REQD	REQUIRED
EC	END CURVE	RPC	RED PLASTIC CAP
EJ	EXPANSION JOINT	RT	RIGHT
E'LY	EASTERLY	R/W	RIGHT OF WAY
EP	EDGE OF PAVEMENT	S	SOUTH
EW	EACH WAY	SD	STORM DRAIN
EXIST	EXISTING	SF	SQUARE FEET
FF	FINISHED FLOOR (ELEVATION)	S'LY	SOUTHERLY
FG	FINISHED GRADE	SMH	SEWER MANHOLE
FH	FIRE HYDRANT	SS	SANITARY SEWER
FL	FLOW LINE	STA	STATION
FP	FIRE PROTECTION	STD	STANDARD
HP	HIGH POINT	SL	SLOPE
ID	INSIDE DIAMETER	ST	STORM (PIPE)
IE	INVERT ELEVATION	TC	TOP OF CURB
IN	INCH	TG	TOP OF GRATE
IR	IRON ROD	TYP	TYPICAL
LT	LEFT	VC	VERTICAL CURVE
MAX	MAXIMUM	W/	WITH
MH	MANHOLE	WA	WATER
MIN	MINIMUM	W	WEST
MISC	MISCELLANEOUS	W'LY	WESTERLY
N'LY	NORTHERLY	WV	WATER VALVE

PRIVATE ENGINEERS NOTICE TO CONTRACTORS

THE EXISTENCE AND APPROXIMATE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES OR STRUCTURES EXCEPT AS SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES NOR FOR UTILITIES OR IRRIGATION LINES WHOSE LOCATIONS ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL UTILITY AND IRRIGATION COMPANIES PRIOR TO WORK ON EXCAVATION TO DETERMINE EXACT LOCATION OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN HERON, AND FOR ANY DAMAGE OR PROTECTION OF THESE LINES. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (U.S.A.) PHONE 1-800 227-2600 TWO (2) WORKING DAYS PRIOR TO DIGGING. NO CONSTRUCTION PERMIT ISSUED BY PUBLIC WORKS DEPARTMENT SHALL BE VALID INVOLVING UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS AN INQUIRY IDENTIFICATION NUMBER ISSUED BY U.S.A.

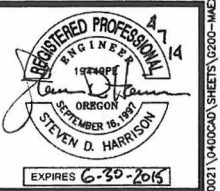
NOTICE TO CONTRACTORS

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE US DEPARTMENT OF LABOR AND WITH THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS "CONSTRUCTION SAFETY ORDERS". THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTOR OR SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

CITY OF MILWAUKIE	DEPARTMENT	CITY LANDSCAPE ARCHITECT	APPROVAL DATE
	SIGNATURE	COMMUNITY DEVELOPMENT	

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL ENGINEERING GENERAL INFORMATION

NO.	DATE	REVISION



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MILWAUKIE RIVERFRONT PARK - LANDSCAPE ARCHITECTURAL - GENERAL INFORMATION

PLANTING NOTES

1. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
2. ALL PLANTS MUST BE CONTAINER GROWN OR BALL AND BURLAP AS INDICATED IN THE PLANT LIST.
3. ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
4. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) OF THE PLANTING AREAS AND LAWN UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE OWNER.
10. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWO (2) YEARS BEGINNING ON THE DATE OF FINAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD. ANY REPLACEMENT PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF TWO (2) YEARS BEGINNING ON THE DATE OF REPLACEMENT.
11. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
12. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES OUTSIDE OF SEASONAL NORM, (PRIOR TO FINAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
13. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
14. ALL SHRUB, GROUND COVER AND SEASONAL COLOR ANNUAL PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH BARK MULCH TO A MINIMUM DEPTH OF TWO INCHES.
15. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF UTILITY LINES ADJACENT TO THE WORK AREA. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD.
16. ALL PLANT MATERIALS QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN GRAPHICALLY.
17. REFER TO SPECIFICATIONS FOR ALL INFORMATION NEEDED FOR IMPLEMENTATION OF PLANTING PLANS.
18. AREAS TO RECEIVE TOPSOIL SHALL BE SCARIFIED PRIOR TO APPLICATION OF TOPSOIL. TOPSOIL SHALL BE "CAT TRACKED" IN PLACE WITH SMALL BULLDOZER SO THAT TRACK INDENTS ARE PARALLEL TO CONTOUR LINES.



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SHEET TITLE	LANDSCAPE ARCHITECTURAL GENERAL INFORMATION

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STRUCTURAL NOTES

1. THE FOLLOWING NOTES APPLY U.N.O. ON PLANS OR SPECIFICATIONS. IN THE CASE OF CONFLICT WITH PLANS OR SPECIFICATIONS, THE MORE RESTRICTIVE REQUIREMENTS SHALL APPLY.

GENERAL

- 1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS AND THE 2010 OREGON STRUCTURAL SPECIALTY CODE. (2009 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF OREGON.)
2. DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES. ANY DEVIATIONS MUST BE APPROVED BY THE GOVERNING AGENCY PRIOR TO ERECTION.
3. ALL ERECTION PROCEDURES SHALL CONFORM TO OSHA STANDARDS. ANY DEVIATION MUST BE APPROVED BY OSHA PRIOR TO ERECTION.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
6. SHOP DRAWINGS REQUIRED BY THE SPECIFICATIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
7. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE ARCHITECT.
8. ALL DETAILS DESIGNATED AS STANDARD OR TYPICAL SHALL OCCUR IN ADDITION TO ANY OTHER SPECIFIC DETAIL CALLED OUT.
9. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCTS, PIPES AND PIPE SLEEVES, ELECTRICAL CONDUITS AND OTHER ITEMS TO BE EMBEDDED IN CONCRETE OR OTHERWISE INCORPORATED IN STRUCTURAL WORK.
10. PROVIDE OPENINGS AND SUPPORTS AS REQUIRED FOR MECHANICAL EQUIPMENT, VENTS, DUCTS, PIPING, ETC. ALL SUSPENDED MECHANICAL EQUIPMENT SHALL BE SWAY OR LATERALLY BRACED IN CONFORMANCE WITH THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), OR AS DETAILED ON THE MECHANICAL ENGINEERS DRAWINGS. ALL OTHER BRACING SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.
11. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT SO THAT THE PROPER REVISIONS MAY BE MADE. MODIFICATIONS OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
12. ARCHITECTURAL AND MECHANICAL PLANS ARE CONSIDERED PART OF THE STRUCTURAL DESIGN DRAWINGS AND ARE TO BE USED TO DEFINE DETAIL CONFIGURATIONS INCLUDING, BUT NOT LIMITED TO RELATIVE LOCATION OF MEMBERS, ELEVATIONS, LOCATION OF ALL OPENINGS, ETC.
13. MECHANICAL EQUIPMENT MUST BE FIRMLY ATTACHED TO THE STRUCTURE. ISOLATORS, FASTENERS AND ANY OTHER ELEMENTS PROVIDING STABILITY FOR MECHANICAL EQUIPMENT MUST BE CAPABLE OF TRANSMITTING REQUIRED CODE LOADS.

DESIGN LOADS

1. GRAVITY LOADS:

Table with 2 columns: LIVE LOAD, ROOF. Value: 25 PSF PLUS SNOW DRIFT

2. LATERAL LOADS:

Table with 2 columns: WIND, 3-SECOND GUST WIND SPEED, WIND IMPORTANCE FACTOR, IW, OCCUPANCY CATEGORY II, WIND EXPOSURE, INTERNAL PRESSURE COEFFICIENT, COMPONENTS AND CLADDING DESIGN WIND PRESSURE. Values: 95 MPH, 1.00, STANDARD OCCUPANCY STRUCTURES, B, ±0.18, 21.5 PSF

EARTHQUAKE

Table with 2 columns: SEISMIC IMPORTANCE FACTOR, IE, OCCUPANCY CATEGORY II, MAPPED SPECTRAL RESPONSE ACCELERATION, SITE CLASS, SPECTRAL RESPONSE COEFFICIENTS, SEISMIC DESIGN CATEGORY, SEISMIC FORCE RESISTING SYSTEM, DESIGN BASE SHEAR, SEISMIC RESPONSE COEFFICIENT, CS, RESPONSE MODIFICATION FACTOR, R, ANALYSIS PROCEDURE USED. Values: IE = 1.00, SS = 0.984, S1 = 0.340, SDS = 0.726, SD1 = 0.388, SPECIAL REINFORCED MASONRY SHEAR WALLS, 8.5 KIPS, 0.362, 5.0, EQUIVALENT LATERAL FORCE

FOUNDATIONS

- 1. THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN REPORT NO. MILWAUKIE-1 BY GEO DESIGN, INC. (GDI), DATED JULY 24, 2000. UNLESS OTHERWISE INDICATED, FOUNDATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS REPORT. THE REPORT IS PART OF THIS PLAN AND SHOULD BE KEPT ON THE JOB SITE AT ALL TIMES.
2. FOUNDATION EXCAVATIONS SHALL BE EXAMINED AND CERTIFIED BY THE SOILS ENGINEER OR HIS REPRESENTATIVE PRIOR TO THE PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE.
3. SEE PROJECT SPECIFICATIONS AND THE FOUNDATION REPORT FOR MATERIAL AND METHOD OF COMPACTION AND BACKFILL.

REINFORCING STEEL

- 1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED. TIES AND STIRRUPS MAY BE GRADE 40 U.N.O.
2. LONGITUDINAL REINFORCEMENT IN FRAME MEMBERS AND IN WALL BOUNDARY ELEMENTS SHALL BE ASTM A706 OR ASTM A615, GRADE 60 WITH MILL CERTIFICATES VERIFYING THE FOLLOWING:
A. ACTUAL YIELD STRENGTH DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI.
B. THE RATIO OF ACTUAL ULTIMATE TENSILE STRENGTH TO ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
3. MINIMUM CONCRETE COVERAGE OF REINFORCING STEEL:
AGAINST GROUND 3"
FORMED, IN CONTACT WITH GROUND 2"
4. ALL REINFORCING STEEL SHALL BE LAPPED PER ACI 318-05 CHAPTER 12 OR TWO FEET MINIMUM UNLESS OTHERWISE NOTED. ALL SPLICES SHALL BE LOCATED AS DETAILED. WHERE LAP OR SPLICE LOCATIONS ARE NOT SPECIFICALLY INDICATED, SPLICES SHALL BE WELL STAGGERED.
5. COMPLETE REINFORCEMENT PLACEMENT DRAWINGS PREPARED IN ACCORDANCE WITH ACI 315 SHALL BE REVIEWED BY THE ENGINEER AND AVAILABLE ON THE JOBSITE PRIOR TO THE PLACING OF CONCRETE.

- 6. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185.
7. ALL REINFORCEMENT TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60 AND AWS D1.4 (U.N.O.)
8. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS SHALL BE SECURELY TIED IN PLACE WITH ANNEALED IRON WIRE BEFORE CONCRETE IS POURED.

CONCRETE

- 1. ALL CONCRETE UNLESS NOTED OTHERWISE SHALL BE REGULAR WEIGHT HARD ROCK TYPE (150 PCF). SILICEOUS AGGREGATES (NATURAL SAND AND ROCK) SHALL CONFORM TO CHAPTER 19 OF THE 2009 IBC AND ASTM C33. NO CALCIUM CHLORIDE OR OTHER DELETERIOUS SALTS OR ALUMINUM EMBEDMENTS ARE PERMITTED IN CONCRETE.
2. ULTIMATE COMPRESSIVE STRENGTHS (AT 28 DAYS) SHALL BE:
FOUNDATION 3000 PSI
WALLS 4000 PSI
SLAB ON GRADE 3000 PSI
OTHER 3000 PSI
3. CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
4. CONCRETE EXPOSED TO THE ELEMENTS SHALL HAVE 5% PLUS OR MINUS 1% ENTRAINED AIR BY VOLUME, CONFORMING TO ASTM C260.
5. MAXIMUM SLUMP SHALL NOT EXCEED 4 INCHES IN FLATWORK.
6. PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH ACI 301. CHAMFER ALL EXPOSED CORNERS 1/4 INCH.
7. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE (5) DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.
8. KEYED CONSTRUCTION JOINTS SHALL BE USED IN ALL CASES. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND ALL LAITANCE SHALL BE REMOVED. ALL VERTICAL JOINTS SHALL BE THOROUGHLY WETTED AND SLUSHED WITH A COAT OF NEAT CEMENT IMMEDIATELY BEFORE PLACING NEW CONCRETE.
9. SUBMIT LOCATION OF POUR JOINTS PRIOR TO PLACEMENT. POUR JOINTS SHALL BE LOCATED TO MINIMIZE EFFECTS OF SHRINKAGE AS WELL AS PLACED AT POINTS OF LOW STRESS. CONSTRUCTION JOINTS IN CONTINUOUS BEAMS AND GRADE BEAMS SHALL OCCUR AT ONE-THIRD SPAN LENGTH.
10. PIPES OTHER THAN ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED.
11. CONCRETE SHALL BE PROTECTED FROM INCLIMATE WATHER AND GRAFFITI. IF FINISH IS NOT TO THE SATISFACTION OF THE CITY ENGINEER, IT WILL BE REMOVED, DISPOSED OF, AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY

- 17. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90-08, GRADE N-1.
18. MORTAR SHALL CONFORM TO ASTM C270-08A, TYPE S. MINIMUM COMPRESSIVE STRENGTH OF MORTAR SHALL BE 2,000 PSI.
19. GROUT SHALL CONFORM TO ASTM C476-08. GROUT ALL CELLS UNLESS OTHERWISE NOTED. MINIMUM COMPRESSIVE STRENGTH OF GROUT SHALL BE 2,200 PSI.
20. CONCRETE MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH F'M = 1,500 PSI.
21. ALL CONCRETE MASONRY OPERATIONS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE ACI MANUAL OF STANDARD PRACTICE, LATEST EDITION.
22. THE THICKNESS OF THE GROUT BETWEEN BLOCK UNITS AND REINFORCING STEEL SHALL NOT BE LESS THAN 1/2 INCH.
23. IF WORK IS STOPPED ONE (1) HOUR OR LONGER, PROVIDE HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT 1 1/2 INCHES BELOW THE TOP OF THE BLOCK.
24. SEE REINFORCING STEEL NOTES AND STANDARD DETAILS FOR REINFORCEMENT REQUIREMENTS. REINFORCING STEEL IN MASONRY SHALL BE LAPPED A MINIMUM OF 50 BAR DIAMETERS FOR SINGLE MAT AND 80 BAR DIAMETERS FOR DOUBLE MAT. ALL REINFORCING SHALL BE SUPPORTED BY ACCESSORIES TO PROPERLY LOCATE AND STABILIZE REINFORCEMENT PRIOR TO GROUT PLACEMENT.

STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL ANGLE, PLATE AND BAR SHALL CONFORM TO ASTM A36. ALL STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. FABRICATION AND ERECTION SHALL BE IN CONFORMANCE WITH THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, LATEST EDITION. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
2. NO ATTEMPT HAS BEEN MADE TO DIFFERENTIATE BETWEEN SHOP AND FIELD WELDED CONNECTIONS. ALL WELDING IS TO COMPLY WITH AWS SPECIFICATIONS AND IS TO BE PERFORMED BY CERTIFIED WELDERS.
3. ARCHITECTURAL PLANS ARE PART OF THE STRUCTURAL DESIGN DRAWINGS AND ARE TO BE USED TO DEFINE DETAIL CONFIGURATIONS INCLUDING, BUT NOT LIMITED TO RELATIVE LOCATIONS OF ALL MEMBERS, ELEVATIONS, LOCATION OF ALL OPENINGS ETC. THE ARCHITECTURAL PLANS MUST BE USED IN THE DEVELOPMENT OF SHOP DRAWINGS.
4. UNLESS A LARGER SIZE OF FILLET WELD IS SPECIFIED ON THE PLANS, PROVIDE MINIMUM SIZE OF WELD PER AISC TABLE J2.4 (9TH ED.)
5. BOLTED CONNECTIONS SHALL BE WITH HIGH STRENGTH BOLTS, CONFORMING TO ASTM A325. ALL BOLTS SHALL BE TENSIONED IN ACCORDANCE WITH A325 AISC REQUIREMENTS.
6. ALL WELDING SHALL BE PREQUALIFIED PER AISC AND AWS D1.1 SPECIFICATIONS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS BY ELECTRIC ARC PROCESS WITH E70XX ELECTRODES. SHOP WELDS SHALL BE PERFORMED IN THE SHOP OF AN APPROVED FABRICATOR.

WOOD

- 1. DIMENSIONAL FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH WITH A MAXIMUM MOISTURE CONTENT OF 19%. MEMBER GRADE AND BENDING STRENGTH SHALL BE AS FOLLOWS:
STUDS AND PLATES (STUD GRADE) FB = 675 PSI
JOISTS AND HEADERS (#2 GRADE) FB = 900 PSI
BEAMS AND STRINGERS (#1 AND BETTER) FB = 1350 PSI
2. GLUE LAMINATED BEAMS AND COLUMNS SHALL BE DOUGLAS FIR-LARCH WITH A MAXIMUM MOISTURE CONTENT OF 15%. MEMBER GRADE AND BENDING STRENGTH SHALL BE AS FOLLOWS:
SIMPLE SPANS 24F-V4 FB = 2400 PSI
CONTINUOUS SPANS 24F-V8 FB = 2400 PSI
3. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.
4. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE NAILING SCHEDULES FOUND IN THE BUILDING CODE. WHERE NOT SHOWN OTHERWISE ON PLANS, ALL NAILING OR SCREWING SHALL BE AS INDICATED IN THE BUILDING CODE. ALL SHEATHING OR GYP BOARD MUST BE NAILED OR SCREWED; ADHESIVES SHALL NOT BE USED IN PLACE OF NAILING.
5. CONNECTORS FOR WOOD CONSTRUCTION SHALL BE SIMPSON OR APPROVED EQUAL. SIMPSON DESIGNATIONS FOR CONNECTORS ARE INDICATED ON PLAN. CONNECTORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
6. FASTEN ALL SILL PLATES TO CONCRETE WITH 1/2" DIAMETER ANCHOR BOLTS WITH 12" EMBEDMENT AT 32" O.C. UNLESS NOTED OTHERWISE.
7. FABRICATED WOOD PRODUCTS (INCLUDING TRUSSES, JOISTS, BEAMS, ETC.) SHALL BE DESIGNED, FABRICATED, AND ERECTED BY THE SUPPLIER IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC), AMERICAN PLYWOOD ASSOCIATION (APA), TRUSS PLATE INSTITUTE (TPI), AND THE BUILDING CODE IN THE CASE OF CONFLICTING DESIGN VALUES, THE MORE CONSERVATIVE VALUE SHALL BE USED.
8. ERECTION DRAWINGS SHALL BE COMPLETE WITH ALL BRACING, BRIDGING, AND ANCHORAGE DETAILS FOR ALL BRACING, TEMPORARY OR PERMANENT. ALL CONNECTIONS NOT OTHERWISE SHOWN SHALL BE DESIGNED, DETAILED, AND HARDWARE SPECIFIED BY THE FABRICATOR. ELEMENTS SHALL BE DESIGNED SPECIFICALLY FOR THE HARDWARE SUPPLIED.

SPECIAL INSPECTIONS

- 1. SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE 2010 OREGON STRUCTURAL SPECIALTY CODE (2009 "INTERNATIONAL BUILDING CODE".) REFER TO TABLES 1 THROUGH 6 FOR SPECIAL INSPECTION AND TESTING REQUIREMENTS.
2. SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS), ASTM D3740 (SOILS), ASTM C1077 (CONCRETE), ASTM A880 (STEEL), AND ASTM E543 (NON-DESTRUCTIVE). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE DESIGN PROFESSIONAL A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTIONS SHALL BE CERTIFIED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1.1 OF AWS D1.1. THE OWNER SHALL SECURE AND PAY FOR THE SERVICES OF THE INSPECTION AND TESTING AGENCY TO PERFORM ALL SPECIAL INSPECTIONS AND TESTS.
3. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, NOTED IN THE INSPECTION REPORTS, AND IF NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL AND THE BUILDING OFFICIAL.
4. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, DESIGN PROFESSIONAL, CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT INDICATING THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.

STRUCTURAL OBSERVATIONS

- 1. STRUCTURAL OBSERVATIONS SHALL CONFORM TO CHAPTER 17 OF THE 2010 OREGON STRUCTURAL SPECIALTY CODE (2009 "INTERNATIONAL BUILDING CODE".)
2. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY THE DESIGN PROFESSIONAL OF RECORD.
3. THE DESIGN PROFESSIONAL SHALL OBSERVE THE INDICATED WORK FOR GENERAL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE OBSERVATION REPORTS.
4. THE DESIGN PROFESSIONAL SHALL FURNISH OBSERVATION REPORTS FOR EACH SITE OBSERVATION TO THE BUILDING OFFICIAL, CONTRACTOR, AND OWNER. A FINAL OBSERVATION REPORT INDICATING THE REQUIRED SITE OBSERVATIONS WERE MADE AND TO THE BEST OF THE DESIGN PROFESSIONAL'S KNOWLEDGE THE WORK IS IN GENERAL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

SUBMITTALS

- 1. SUBMITTALS FOR SHOP DRAWINGS, MILL TESTS, PRODUCT DATA, ETC. FOR ITEMS DESIGNED BY THE ENGINEER OF RECORD SHALL BE MADE TO THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW THE SUBMITTAL BEFORE FORWARDING TO THE ARCHITECT. SUBMITTALS SHALL BE MADE IN TIME TO PROVIDE A TWO-WEEK REVIEW PERIOD FOR THE ARCHITECT/ENGINEER. SUBMITTALS REQUIRED FOR EACH SECTION OF THESE NOTES ARE SPECIFIED IN THAT SECTION.
2. SHOP DRAWING REVIEW: REVIEW BY THE ARCHITECT/ENGINEER IS FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT AND THE CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, NOR DEPARTURES THERE FROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY; FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; FOR SELECTING FABRICATION PROCESSES; FOR TECHNIQUES OF ASSEMBLY; AND FOR PERFORMING WORK IN A SECURE MANNER. WHEN SHOP DRAWINGS DIFFER FROM OR ADD TO THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS, THEY SHALL BE DESIGNED AND STAMPED BY A SPECIALTY STRUCTURAL ENGINEER (SSE). REFER TO DESIGN BY OTHERS BELOW.
3. DESIGN BY OTHERS:
A. LOADS: ALL PRE-ENGINEERED, PREFABRICATED, MANUFACTURED, OR OTHER PRODUCTS DESIGNED BY OTHERS SHALL BE DESIGNED FOR THE TRIBUTARY DEAD AND LIVE LOADS PLUS WIND AND EARTHQUAKE LOADS WHEN APPLICABLE. LIVE ARE SHOWN BELOW. TOTAL DESIGN DEAD LOADS ARE SHOWN BELOW. DESIGN SHALL CONFORM TO THE SPECIFICATIONS, REFERENCE STANDARDS AND GOVERNING CODE.

BRIDGE LOADING - HS 20

B. DEFERRED SUBMITTALS: ITEMS DESIGNED BY OTHER SHALL INCLUDE CALCULATIONS, DESIGN DRAWINGS, PRODUCT DATA AND SHOP DRAWINGS. DESIGN SHALL BE PREPARED BY A SPECIALTY STRUCTURAL ENGINEER AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW. THESE ELEMENTS INCLUDE BUT ARE NOT LIMITED TO:

Table with 2 columns: ITEM, 1. ALUMINUM BOX CULVERTS (INCLUDING HEADWALLS, WINGWALLS AND FOUNDATIONS)

C. REVIEW: REVIEW OF THE SPECIALTY STRUCTURAL ENGINEER'S (SSE) DESIGN AND SHOP DRAWINGS IS FOR COMPLIANCE WITH DESIGN CRITERIA AND COMPATIBILITY WITH THE DESIGN OF THE PRIMARY STRUCTURE AND DOES NOT RELIEVE THE SSE OF RESPONSIBILITY FOR THAT DESIGN.

- 4. INSPECTION SUBMITTALS: THE SPECIAL INSPECTOR SHALL SUBMIT COPIES OF ALL SPECIAL INSPECTION REPORTS TO THE ARCHITECT/ENGINEER FOR REVIEW.
5. STRUCTURAL OBSERVATIONS: THE OWNER SHALL EMPLOY THE ENGINEER OF RECORD TO PERFORM A VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATIONS SHALL CONFORM TO CHAPTER 17 OF THE 2010 OREGON STRUCTURAL SPECIALTY CODE.

A. STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED AT LEAST 48 HOURS BEFORE DESIGNATED WORK IS TO BE COVERED IN ORDER TO PERFORM A STRUCTURAL OBSERVATION OF THE FOLLOWING WORK:

Table with 2 columns: ITEM, 1. FOUNDATIONS, REINFORCING STEEL

ABBREVIATIONS

Table with 4 columns: ABBREVIATION, DESCRIPTION, REFERENCE, REQUIREMENT. Includes entries like ADDL, ALT, ARCH, BLDG, BLKG, CLR, CMU, COL, CONC, CONN, CONT, DBL, DF, Ø OR DIA, DWG, EA, EL OR ELEV, EQ, EQUIV, E.W, (E), EXT, FDN, FT, FTG, F/, HORIZ, HORIZ, INT, IN, INT, MAX, MIN, MISC, (N), N.T.S., O.C, OPP, P, PSF, Q, Q.C, Q.C, R, R, S, SF, SF, SF, STD, STRUCT, T.O.S, T&B, TYP, U.N.O, UNLESS NOTED OTHERWISE, VERT, VERTICAL, W/, WITH, W/O, WITHOUT.

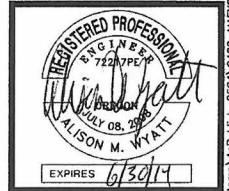


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Table with 3 columns: DEPARTMENT, CITY LANDSCAPE ARCHITECT, COMMUNITY DEVELOPMENT, PUBLIC WORKS. Includes City of Milwaukie and Milwaukie Riverfront Park Phase 2 - Boat Ramp and Pathway.

Project title: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY. Includes sheet title: STRUCTURAL GENERAL NOTES.

Table for revision tracking with columns: NO, DATE, REVISION BY.



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: KEMA
CK:

G400
JOB NO. MAEX000-0021

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SYSTEM or MATERIAL	REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			Continuous	Periodic	
SOILS					
GEOTECHNICAL INVESTIGATIONS	1803.0				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING
VERIFY FOOTING BEARING CAPACITY AND SUBGRADE PREPARATION FOR FILLS				X	
FILL MATERIAL VERIFICATION	TABLE 1704.7	GEOTECHNICAL REPORT		X	
FILL PLACEMENT & COMPACTION				X	
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1704.7			X	
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1704.7			X	
PERFORM CLASSIFICATION OF COMPACTED FILL MATERIALS	TABLE 1704.7 1803.5.1			X	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1704.7			X	

SYSTEM or MATERIAL	REQUIRED TESTING for SPECIAL INSPECTIONS				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			Continuous	Periodic	
GEOTECHNICAL					
GEOTECHNICAL ENGINEER TO PERFORM TESTING OF COMPACTED FILL MATERIALS	1803.0				TESTING PER GEOTECHNICAL REPORT
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY		VARIES; MINIMUM PER IBC APPENDIX J107.5		X	BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION	1704.7	VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X	BY THE GEOTECHNICAL ENGINEER
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	TABLE 1704.4	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8		X	FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT ² OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FROM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL.
CONCRETE STRENGTH	TABLE 1704.4 1903 1905	ASTM C39		X	
CONCRETE SLUMP		ASTM C143		X	
CONCRETE AIR CONTENT		ASTM C231		X	
CONCRETE TEMPERATURE		ASTM C1064		X	
MASONRY					
UNIT STRENGTH METHOD	2105.2.2.1	ASTM C62 ASTM C216 ASTM C652 ASTM C478 ASTM C55 ASTM C90			
PRISM TEST METHOD	2105.2.2.2	ASTM C1314	TESTING EVERY 5,000 FT ²		
COMPRESSIVE STRENGTH OF MORTAR		MIA - INSPECTOR'S HANDBOOK ASTM C780			(1) TEST PER DAY FOR 3 CONSECUTIVE WORK DAYS AT THE START OF THE JOB. ONE TEST SHALL CONSIST OF 3 SPECIMENS. AFTER THE FIRST THREE TESTS, SPECIMENS FOR CONTINUING QUALITY CONTROL SHALL BE TAKEN ONCE A WEEK, OR FOR EVERY 5,000 SQ. FT. OF WALL, WHICHEVER IS FIRST.
COMPRESSIVE STRENGTH OF GROUT		MIA - INSPECTOR'S HANDBOOK ASTM C780			AT THE START OF GROUTING OPERATIONS, TAKE ONE TEST PER DAY FOR THE FIRST THREE DAYS. THE TESTS SHALL CONSIST OF 3 SPECIMENS. AFTER THE FIRST 3 TESTS, SPECIMENS FOR CONTINUING QUALITY CONTROL SHALL BE TAKEN ONCE A WEEK OR FOR EVERY 30 CU. YDS. OF GROUT OR FOR EVERY 5,000 SQ. FT. OF WALL, WHICHEVER COMES FIRST.

Special Inspector
City Bldg Inspector
Both

SYSTEM or MATERIAL	REQUIRED STRUCTURAL SPECIAL INSPECTIONS				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			Continuous	Periodic	
FABRICATORS					
FABRICATORS	1704.2			X	SPECIAL INSPECTIONS APPLY TO VERIFICATION OF DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES INCLUDING REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS
CONCRETE					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1912.1	ACI 318: 3.8.6, 8.1.3, 21.1.8		X	
REINFORCING STEEL PLACEMENT	1704.4 1807.5 1913.4 1901.4.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6
PLACEMENT OF BOLTS INSTALLED IN CONCRETE	TABLE 1704.4 1911.5 1912.1	ACI 318: 1.3.2.C ACI 318: 8.1.3 ACI 318: 21.1.8		X	ALL BOLTS VISUALLY INSPECTED
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1704.4 1904 1905.2-4 1913.2 1913.3 1901.4.1	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1704.4 1905.9-10	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10		X	
CONCRETE CURING	TABLE 1704.4 1905.11-13 1913.9	ACI 318: 1.3.2.D ACI 318: 5.11-5.13		X	
VERIFYING USE OF FORMWORK	TABLE 1704.4 1906.1	ACI 318: 6.1.1		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
MASONRY LEVEL 1					
COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED		TMS 602: 1.5		X	
VERIFYING OF F'm PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE		TMS 602: 1.4B		X	
VERIFYING OF SLUMP FLOW AND VIS AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT		TMS 602: 1.5B.1.b.3		X	
AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:					
A) VERIFICATION OF SITE-PROPORTIONED MORTAR		TMS 602: 2.6 A		X	
B) LOCATION OF REINFORCEMENT AND CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGE		TMS 602 3.4, 3.6a		X	
C) CONSTRUCTION OF MORTAR JOINTS		TMS 602: 3.3 B		X	
DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY:					
A) SIZE AND LOCATION OF STRUCTURAL ELEMENTS		TMS 602: 3.3 F		X	
B) ANCHORAGE OF MASONRY TO FRAMES, STRUCTURAL MEMBERS, AND DIAPHRAGMS		TMS 402: 1.16.1 TMS 402: 1.2.2 (e) TMS 402: 2.1.4 TMS 402: 3.1.6		X	
C) SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES		TMS 402: 1.15 TMS 602: 2.4 TMS 602: 3.4		X	
PREPARATION, CONSTRUCTION, AND PROTECTION DURING COLD WEATHER (TEMPERATURE BELOW 40F) AND HOT WEATHER (TEMPERATURE ABOVE 90F)	2104.3 2104.4	TMS 602: 1.8C TMS 602: 1.8D		X	
PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:					
VERIFYING GROUT SPACE IS CLEAN PRIOR TO GROUTING		TMS 602: 3.2D		X	
PLACEMENT OF REINFORCEMENT AND CONNECTORS		TMS 402: 1.13 TMS 602: 3.4		X	
PROPORTIONS OF SITE PREPARED GROUT		TMS 602: 2.6B		X	
CONSTRUCTION OF MORTAR JOINTS		TMS 602: 3.3B		X	
GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE		TMS 602: 3.5		X	
PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED	2105.2.2 2105.3	TMS 602: 1.4		X	
STEEL					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD FORMED STEEL DECK	1704.3 2203.1	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 M5.5		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS, AND WASHERS	1704.3.3	ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS RCSC 2.1		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS	1704.3	AISC 360 A3.4 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	1704.3.1	AISC 360 A3.5 APPLICABLE AWS A5 DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S				X	COPY OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS				X	COPY OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	1704.3.1	AWS D1.1 SECTION 6		X	
MULTIPASS FILLET WELDS				X	
SINGLE PASS FILLET WELDS GREATER THAN 5/16"	1704.3.1	AWS D1.1, SECTION 6		X	ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
PLUG AND SLOT WELDS	TABLE 1704.4			X	
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"				X	
COLD-FORMED STEEL FRAMING					
MATERIAL VERIFICATION OF WELD FILLER METALS	1704.3.2 Exception 2 & 1704.3.1.2	AWS D1.3 SECTION 7		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S				X	COPY OF WELDING PROCEDURE SPECIFICATIONS
COLD-FORMED STEEL ROOF AND FLOOR DECKS	1704.3.1.2	AWS D1.3		X	WELDING INSPECTION AND INSPECTOR QUALIFICATION
VERIFYING WELDER QUALIFICATIONS	1704.3 Exception 2			X	COPY OF QUALIFICATION CARDS
WELDED FRAMING CONNECTIONS		AWS D1.3 SECTION 7		X	ALL WELDS VISUALLY INSPECTED PER AWS D1.3 7.1
POST INSTALLED CONCRETE ANCHORS					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1912.1	ICC EVALUATION REPORT ACI 318: 3.8.6, 8.1.3, 21.1.8		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
ALUMINUM					
MATERIAL VERIFICATION OF STRUCTURAL ALUMINUM	1704.15			X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF BOLTS				X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS				X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S				X	COPY OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS				X	COPY OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS		AWS D1.2 SECTION 5		X	
MULTIPASS FILLET WELDS				X	ALL WELDS VISUALLY INSPECTED PER AWS 1.2, 5.5
SINGLE PASS FILLET WELDS				X	
WOOD					
FABRICATION OF PREFABRICATED STRUCTURAL ELEMENTS	1704.2			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS

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DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
		PUBLIC WORKS

PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
STRUCTURAL
SPECIAL INSPECTIONS

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: KEMA
CK:

G401
JOB NO. MAEX0000-0021

STRUCTURAL NOTES

1. THE FOLLOWING NOTES APPLY U.N.O. ON PLANS OR SPECIFICATIONS. IN THE CASE OF CONFLICT WITH PLANS OR SPECIFICATIONS, THE MORE RESTRICTIVE REQUIREMENTS SHALL APPLY.

GENERAL

- 1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS AND THE 2010 OREGON STRUCTURAL SPECIALTY CODE. (2009 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF OREGON.)
2. DURING THE CONSTRUCTION PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES. ANY DEVIATIONS MUST BE APPROVED BY THE GOVERNING AGENCY PRIOR TO ERECTION.
3. ALL ERECTION PROCEDURES SHALL CONFORM TO OSHA STANDARDS. ANY DEVIATION MUST BE APPROVED BY OSHA PRIOR TO ERECTION.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
6. SHOP DRAWINGS REQUIRED BY THE SPECIFICATIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
7. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE ARCHITECT.
8. ALL DETAILS DESIGNATED AS STANDARD OR TYPICAL SHALL OCCUR IN ADDITION TO ANY OTHER SPECIFIC DETAIL CALLED OUT.
9. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCTS, PIPES AND PIPE SLEEVES, ELECTRICAL CONDUITS AND OTHER ITEMS TO BE EMBEDDED IN CONCRETE OR OTHERWISE INCORPORATED IN STRUCTURAL WORK.
10. PROVIDE OPENINGS AND SUPPORTS AS REQUIRED FOR MECHANICAL EQUIPMENT, VENTS, DUCTS, PIPING, ETC. ALL SUSPENDED MECHANICAL EQUIPMENT SHALL BE SWAY OR LATERALLY BRACED IN CONFORMANCE WITH THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), OR AS DETAILED ON THE MECHANICAL ENGINEERS DRAWINGS. ALL OTHER BRACING SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.
11. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE ARCHITECT SO THAT THE PROPER REVISIONS MAY BE MADE. MODIFICATIONS OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
12. ARCHITECTURAL AND MECHANICAL PLANS ARE CONSIDERED PART OF THE STRUCTURAL DESIGN DRAWINGS AND ARE TO BE USED TO DEFINE DETAIL CONFIGURATIONS INCLUDING, BUT NOT LIMITED TO RELATIVE LOCATION OF MEMBERS, ELEVATIONS, LOCATION OF ALL OPENINGS, ETC.
13. MECHANICAL EQUIPMENT MUST BE FIRMLY ATTACHED TO THE STRUCTURE. ISOLATORS, FASTENERS AND ANY OTHER ELEMENTS PROVIDING STABILITY FOR MECHANICAL EQUIPMENT MUST BE CAPABLE OF TRANSMITTING REQUIRED CODE LOADS.

DESIGN LOADS

- 1. GRAVITY LOADS:
LIVE LOAD ROOF 25 PSF PLUS SNOW DRIFT
2. LATERAL LOADS:
WIND
3-SECOND GUST WIND SPEED 95 MPH
WIND IMPORTANCE FACTOR, IW 1.00
OCCUPANCY CATEGORY II STANDARD OCCUPANCY STRUCTURES
WIND EXPOSURE B
INTERNAL PRESSURE COEFFICIENT ±0.18
COMPONENTS AND CLADDING DESIGN WIND PRESSURE 21.5 PSF

EARTHQUAKE

- SEISMIC IMPORTANCE FACTOR, IE IE = 1.00
OCCUPANCY CATEGORY II
MAPPED SPECTRAL RESPONSE ACCELERATION SS = 0.984, S1 = 0.340
SITE CLASS D
SPECTRAL RESPONSE COEFFICIENTS SDS = 0.726 SD1 = 0.388
SEISMIC DESIGN CATEGORY D
SEISMIC FORCE RESISTING SYSTEM SPECIAL REINFORCED MASONRY SHEAR WALLS
DESIGN BASE SHEAR 8.5 KIPS
SEISMIC RESPONSE COEFFICIENT, CS 0.362
RESPONSE MODIFICATION FACTOR, R 5.0
ANALYSIS PROCEDURE USED EQUIVALENT LATERAL FORCE

FOUNDATIONS

- 1. THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN REPORT NO. MILWAUKIE-1 BY GEO DESIGN, INC. (GDI), DATED JULY 24, 2000. UNLESS OTHERWISE INDICATED, FOUNDATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS REPORT. THE REPORT IS PART OF THIS PLAN AND SHOULD BE KEPT ON THE JOB SITE AT ALL TIMES.
2. FOUNDATION EXCAVATIONS SHALL BE EXAMINED AND CERTIFIED BY THE SOILS ENGINEER OR HIS REPRESENTATIVE PRIOR TO THE PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE.
3. SEE PROJECT SPECIFICATIONS AND THE FOUNDATION REPORT FOR MATERIAL AND METHOD OF COMPACTION AND BACKFILL.

REINFORCING STEEL

- 1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED. TIES AND STIRRUPS MAY BE GRADE 40 U.N.O.
2. LONGITUDINAL REINFORCEMENT IN FRAME MEMBERS AND IN WALL BOUNDARY ELEMENTS SHALL BE ASTM A706 OR ASTM A615, GRADE 60 WITH MILL CERTIFICATES VERIFYING THE FOLLOWING:
A. ACTUAL YIELD STRENGTH DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI.
B. THE RATIO OF ACTUAL ULTIMATE TENSILE STRENGTH TO ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
3. MINIMUM CONCRETE COVERAGE OF REINFORCING STEEL:
AGAINST GROUND 3"
FORMED, IN CONTACT WITH GROUND 2"
4. ALL REINFORCING STEEL SHALL BE LAPPED PER ACI 318-05 CHAPTER 12 OR TWO FEET MINIMUM UNLESS OTHERWISE NOTED. ALL SPLICES SHALL BE LOCATED AS DETAILED. WHERE LAP OR SPLICE LOCATIONS ARE NOT SPECIFICALLY INDICATED, SPLICES SHALL BE WELL STAGGERED.
5. COMPLETE REINFORCEMENT PLACEMENT DRAWINGS PREPARED IN ACCORDANCE WITH ACI 315 SHALL BE REVIEWED BY THE ENGINEER AND AVAILABLE ON THE JOBSITE PRIOR TO THE PLACING OF CONCRETE.

- 6. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185.
7. ALL REINFORCEMENT TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60 AND AWS D1.4 (U.N.O.)
8. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS SHALL BE SECURELY TIED IN PLACE WITH ANNEALED IRON WIRE BEFORE CONCRETE IS POURED.

CONCRETE

- 1. ALL CONCRETE UNLESS NOTED OTHERWISE SHALL BE REGULAR WEIGHT HARD ROCK TYPE (150 PCF). SILICEOUS AGGREGATES (NATURAL SAND AND ROCK) SHALL CONFORM TO CHAPTER 19 OF THE 2009 IBC AND ASTM C33. NO CALCIUM CHLORIDE OR OTHER DELETERIOUS SALTS OR ALUMINUM EMBEDMENTS ARE PERMITTED IN CONCRETE.
2. ULTIMATE COMPRESSIVE STRENGTHS (AT 28 DAYS) SHALL BE:
FOUNDATION 3000 PSI
WALLS 4000 PSI
SLAB ON GRADE 3000 PSI
OTHER 3000 PSI
3. CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
4. CONCRETE EXPOSED TO THE ELEMENTS SHALL HAVE 5% PLUS OR MINUS 1% ENTRAINED AIR BY VOLUME, CONFORMING TO ASTM C260.
5. MAXIMUM SLUMP SHALL NOT EXCEED 4 INCHES IN FLATWORK.
6. PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH ACI 301. CHAMFER ALL EXPOSED CORNERS 1/4 INCH.
7. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE (5) DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.
8. KEYS IN CONSTRUCTION JOINTS SHALL BE USED IN ALL CASES. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND ALL LAITANCE SHALL BE REMOVED. ALL VERTICAL JOINTS SHALL BE THOROUGHLY WETTED AND SLUSHED WITH A COAT OF NEAT CEMENT IMMEDIATELY BEFORE PLACING NEW CONCRETE.
9. SUBMIT LOCATION OF POUR JOINTS PRIOR TO PLACEMENT. POUR JOINTS SHALL BE LOCATED TO MINIMIZE EFFECTS OF SHRINKAGE AS WELL AS PLACED AT POINTS OF LOW STRESS. CONSTRUCTION JOINTS IN CONTINUOUS BEAMS AND GRADE BEAMS SHALL OCCUR AT ONE-THIRD SPAN LENGTH.
10. PIPES OTHER THAN ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED.
11. CONCRETE SHALL BE PROTECTED FROM INCLIMATE WATHER AND GRAFFITI. IF FINISH IS NOT TO THE SATISFACTION OF THE CITY ENGINEER, IT WILL BE REMOVED, DISPOSED OF, AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY

- 17. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90-08, GRADE N-1.
18. MORTAR SHALL CONFORM TO ASTM C270-08A, TYPE S. MINIMUM COMPRESSIVE STRENGTH OF MORTAR SHALL BE 2,000 PSI.
19. GROUT SHALL CONFORM TO ASTM C476-08. GROUT ALL CELLS UNLESS OTHERWISE NOTED. MINIMUM COMPRESSIVE STRENGTH OF GROUT SHALL BE 2,200 PSI.
20. CONCRETE MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH F'M = 1,500 PSI.
21. ALL CONCRETE MASONRY OPERATIONS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE ACI MANUAL OF STANDARD PRACTICE, LATEST EDITION.
22. THE THICKNESS OF THE GROUT BETWEEN BLOCK UNITS AND REINFORCING STEEL SHALL NOT BE LESS THAN 1/2 INCH.
23. IF WORK IS STOPPED ONE (1) HOUR OR LONGER, PROVIDE HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT 1 1/2 INCHES BELOW THE TOP OF THE BLOCK.
24. SEE REINFORCING STEEL NOTES AND STANDARD DETAILS FOR REINFORCEMENT REQUIREMENTS. REINFORCING STEEL IN MASONRY SHALL BE LAPPED A MINIMUM OF 50 BAR DIAMETERS FOR SINGLE MAT AND 80 BAR DIAMETERS FOR DOUBLE MAT. ALL REINFORCING SHALL BE SUPPORTED BY ACCESSORIES TO PROPERLY LOCATE AND STABILIZE REINFORCEMENT PRIOR TO GROUT PLACEMENT.

STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL ANGLE, PLATE AND BAR SHALL CONFORM TO ASTM A36. ALL STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. FABRICATION AND ERECTION SHALL BE IN CONFORMANCE WITH THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, LATEST EDITION. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
2. NO ATTEMPT HAS BEEN MADE TO DIFFERENTIATE BETWEEN SHOP AND FIELD WELDED CONNECTIONS. ALL WELDING IS TO COMPLY WITH AWS SPECIFICATIONS AND IS TO BE PERFORMED BY CERTIFIED WELDERS.
3. ARCHITECTURAL PLANS ARE PART OF THE STRUCTURAL DESIGN DRAWINGS AND ARE TO BE USED TO DEFINE DETAIL CONFIGURATIONS INCLUDING, BUT NOT LIMITED TO RELATIVE LOCATIONS OF ALL MEMBERS, ELEVATIONS, LOCATION OF ALL OPENINGS ETC. THE ARCHITECTURAL PLANS MUST BE USED IN THE DEVELOPMENT OF SHOP DRAWINGS.
4. UNLESS A LARGER SIZE OF FILLET WELD IS SPECIFIED ON THE PLANS, PROVIDE MINIMUM SIZE OF WELD PER AISC TABLE J2.4 (9TH ED.)
5. BOLTED CONNECTIONS SHALL BE WITH HIGH STRENGTH BOLTS, CONFORMING TO ASTM A325. ALL BOLTS SHALL BE TENSIONED IN ACCORDANCE WITH A325 AISC REQUIREMENTS.
6. ALL WELDING SHALL BE PREQUALIFIED PER AISC AND AWS D1.1 SPECIFICATIONS. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS BY ELECTRIC ARC PROCESS WITH E70XX ELECTRODES. SHOP WELDS SHALL BE PERFORMED IN THE SHOP OF AN APPROVED FABRICATOR.

WOOD

- 1. DIMENSIONAL FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH WITH A MAXIMUM MOISTURE CONTENT OF 19% MEMBER GRADE AND BENDING STRENGTH SHALL BE AS FOLLOWS:
STUDS AND PLATES (STUD GRADE) FB = 675 PSI
JOISTS AND HEADERS (#2 GRADE) FB = 900 PSI
BEAMS AND STRINGERS (#1 AND BETTER) FB = 1350 PSI
2. GLUE LAMINATED BEAMS AND COLUMNS SHALL BE DOUGLAS FIR-LARCH WITH A MAXIMUM MOISTURE CONTENT OF 15%. MEMBER GRADE AND BENDING STRENGTH SHALL BE AS FOLLOWS:
SIMPLE SPANS 24F-V4 FB = 2400 PSI
CONTINUOUS SPANS 24F-V8 FB = 2400 PSI
3. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.
4. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE NAILING SCHEDULES FOUND IN THE BUILDING CODE. WHERE NOT SHOWN OTHERWISE ON PLANS, ALL NAILING OR SCREWING SHALL BE AS INDICATED IN THE BUILDING CODE. ALL SHEATHING OR GYP BOARD MUST BE NAILED OR SCREWED; ADHESIVES SHALL NOT BE USED IN PLACE OF NAILING.
5. CONNECTORS FOR WOOD CONSTRUCTION SHALL BE SIMPSON OR APPROVED EQUAL. SIMPSON DESIGNATIONS FOR CONNECTORS ARE INDICATED ON PLAN. CONNECTORS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
6. FASTEN ALL SILL PLATES TO CONCRETE WITH 1/2" DIAMETER ANCHOR BOLTS WITH 12" EMBEDMENT AT 32" O.C. UNLESS NOTED OTHERWISE.
7. FABRICATED WOOD PRODUCTS (INCLUDING TRUSSES, JOISTS, BEAMS, ETC.) SHALL BE DESIGNED, FABRICATED, AND ERECTED BY THE SUPPLIER IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC), AMERICAN PLYWOOD ASSOCIATION (APA), TRUSS PLATE INSTITUTE (TPI), AND THE BUILDING CODE IN THE CASE OF CONFLICTING DESIGN VALUES, THE MORE CONSERVATIVE VALUE SHALL BE USED.
8. ERECTION DRAWINGS SHALL BE COMPLETE WITH ALL BRACING, BRIDGING, AND ANCHORAGE DETAILS FOR ALL BRACING, TEMPORARY OR PERMANENT. ALL CONNECTIONS NOT OTHERWISE SHOWN SHALL BE DESIGNED, DETAILED, AND HARDWARE SPECIFIED BY THE FABRICATOR. ELEMENTS SHALL BE DESIGNED SPECIFICALLY FOR THE HARDWARE SUPPLIED.

SPECIAL INSPECTIONS

- 1. SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE 2010 OREGON STRUCTURAL SPECIALTY CODE (2009 INTERNATIONAL BUILDING CODE.) REFER TO TABLES 1 THROUGH 6 FOR SPECIAL INSPECTION AND TESTING REQUIREMENTS.
2. SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS), ASTM D3740 (SOILS), ASTM C1077 (CONCRETE), ASTM A880 (STEEL), AND ASTM E543 (NON-DESTRUCTIVE). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE DESIGN PROFESSIONAL A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE CERTIFIED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1.1 OF AWS D1.1. THE OWNER SHALL SECURE AND PAY FOR THE SERVICES OF THE INSPECTION AND TESTING AGENCY TO PERFORM ALL SPECIAL INSPECTIONS AND TESTS.
3. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, NOTED IN THE INSPECTION REPORTS, AND IF NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL AND THE BUILDING OFFICIAL.
4. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, DESIGN PROFESSIONAL, CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT INDICATING THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.

STRUCTURAL OBSERVATIONS

- 1. STRUCTURAL OBSERVATIONS SHALL CONFORM TO CHAPTER 17 OF THE 2010 OREGON STRUCTURAL SPECIALTY CODE (2009 INTERNATIONAL BUILDING CODE.)
2. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY THE DESIGN PROFESSIONAL OF RECORD.
3. THE DESIGN PROFESSIONAL SHALL OBSERVE THE INDICATED WORK FOR GENERAL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE OBSERVATION REPORTS.
4. THE DESIGN PROFESSIONAL SHALL FURNISH OBSERVATION REPORTS FOR EACH SITE OBSERVATION TO THE BUILDING OFFICIAL, CONTRACTOR, AND OWNER. A FINAL OBSERVATION REPORT INDICATING THE REQUIRED SITE OBSERVATIONS WERE MADE AND TO THE BEST OF THE DESIGN PROFESSIONAL'S KNOWLEDGE THE WORK IS IN GENERAL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

SUBMITTALS

- 1. SUBMITTALS FOR SHOP DRAWINGS, MILL TESTS, PRODUCT DATA, ETC. FOR ITEMS DESIGNED BY THE ENGINEER OF RECORD SHALL BE MADE TO THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW THE SUBMITTAL BEFORE FORWARDING TO THE ARCHITECT. SUBMITTALS SHALL BE MADE IN TIME TO PROVIDE A TWO-WEEK REVIEW PERIOD FOR THE ARCHITECT/ENGINEER. SUBMITTALS REQUIRED FOR EACH SECTION OF THESE NOTES ARE SPECIFIED IN THAT SECTION.
2. SHOP DRAWING REVIEW: REVIEW BY THE ARCHITECT/ENGINEER IS FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT AND THE CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, NOR DEPARTURES THERE FROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY. FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; FOR SELECTING FABRICATION PROCESSES; FOR TECHNIQUES OF ASSEMBLY; AND FOR PERFORMING WORK IN A SECURE MANNER. WHEN SHOP DRAWINGS DIFFER FROM OR ADD TO THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS, THEY SHALL BE DESIGNED AND STAMPED BY A SPECIALTY STRUCTURAL ENGINEER (SSE). REFER TO DESIGN BY OTHERS BELOW.
3. DESIGN BY OTHERS:
A. LOADS: ALL PRE-ENGINEERED, PREFABRICATED, MANUFACTURED, OR OTHER PRODUCTS DESIGNED BY OTHERS SHALL BE DESIGNED FOR THE TRIBUTARY DEAD AND LIVE LOADS PLUS WIND AND EARTHQUAKE LOADS WHEN APPLICABLE. LIVE ARE SHOWN BELOW. TOTAL DESIGN DEAD LOADS ARE SHOWN BELOW. DESIGN SHALL CONFORM TO THE SPECIFICATIONS, REFERENCE STANDARDS AND GOVERNING CODE.

BRIDGE LOADING - HS 20

- B. DEFERRED SUBMITTALS: ITEMS DESIGNED BY OTHER SHALL INCLUDE CALCULATIONS, DESIGN DRAWINGS, PRODUCT DATA AND SHOP DRAWINGS. DESIGN SHALL BE PREPARED BY A SPECIALTY STRUCTURAL ENGINEER AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW. THESE ELEMENTS INCLUDE BUT ARE NOT LIMITED TO:

Table with 2 columns: ITEM, DESCRIPTION. Row 1: ALUMINUM BOX CULVERTS (INCLUDING HEADWALLS, WINGWALLS AND FOUNDATIONS)

- C. REVIEW: REVIEW OF THE SPECIALTY STRUCTURAL ENGINEER'S (SSE) DESIGN AND SHOP DRAWINGS IS FOR COMPLIANCE WITH DESIGN CRITERIA AND COMPATIBILITY WITH THE DESIGN OF THE PRIMARY STRUCTURE AND DOES NOT RELIEVE THE SSE OF RESPONSIBILITY FOR THAT DESIGN.

- 4. INSPECTION SUBMITTALS: THE SPECIAL INSPECTOR SHALL SUBMIT COPIES OF ALL SPECIAL INSPECTION REPORTS TO THE ARCHITECT/ENGINEER FOR REVIEW.

- 5. STRUCTURAL OBSERVATIONS: THE OWNER SHALL EMPLOY THE ENGINEER OF RECORD TO PERFORM A VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATIONS SHALL CONFORM TO CHAPTER 17 OF THE 2010 OREGON STRUCTURAL SPECIALTY CODE.

A. STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED AT LEAST 48 HOURS BEFORE DESIGNATED WORK IS TO BE COVERED IN ORDER TO PERFORM A STRUCTURAL OBSERVATION OF THE FOLLOWING WORK:

Table with 2 columns: ITEM, DESCRIPTION. Row 1: FOUNDATIONS, REINFORCING STEEL

ABBREVIATIONS

Table with 4 columns: ABBREVIATION, DESCRIPTION, REFERENCE, REFERENCE. Includes entries for ADDL, ALT, ARCH, BLDG, BLKG, CLR, CMU, COL, CONC, CONN, CONT, DBL, DF, DIA, DWG, EA, EL OR ELEV, EQ, EQUIV, E.W, (E), EXT, FDN, FT, FTG, F/, HORIZ, IBC, IN, INT, MAX, MIN, MISC, (N), N.T.S., O.C, OPP, PLATE, PSF, PSI, PT, REINFORCING, REQ'D, REQUIRED, SCHEDULE, SIM, SIMP, SPEC, SQ, SF, STD, STRUCT, T.O.S, T&B, TYP, U.N.O, UNLESS NOTED, VERT, VERTICAL, W/, W/O, WITH, WITHOUT.

Professional Engineer Seal for David Evans, License No. 125287, State of Oregon. Address: 2100 SW River F., Portland OR 97261. Phone: 503.223.6663. Fax: 503.223.2701.

Approval Table for City of Milwaukie. Columns: DEPARTMENT, CITY LANDSCAPE ARCHITECT, COMMUNITY DEVELOPMENT, PUBLIC WORKS. Rows: SIGNATURE, APPROVAL DATE.

Project Title: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY. S.E. HARRISON STREET - KELLOGG CREEK. Sheet Title: STRUCTURAL GENERAL. Project No: 3.

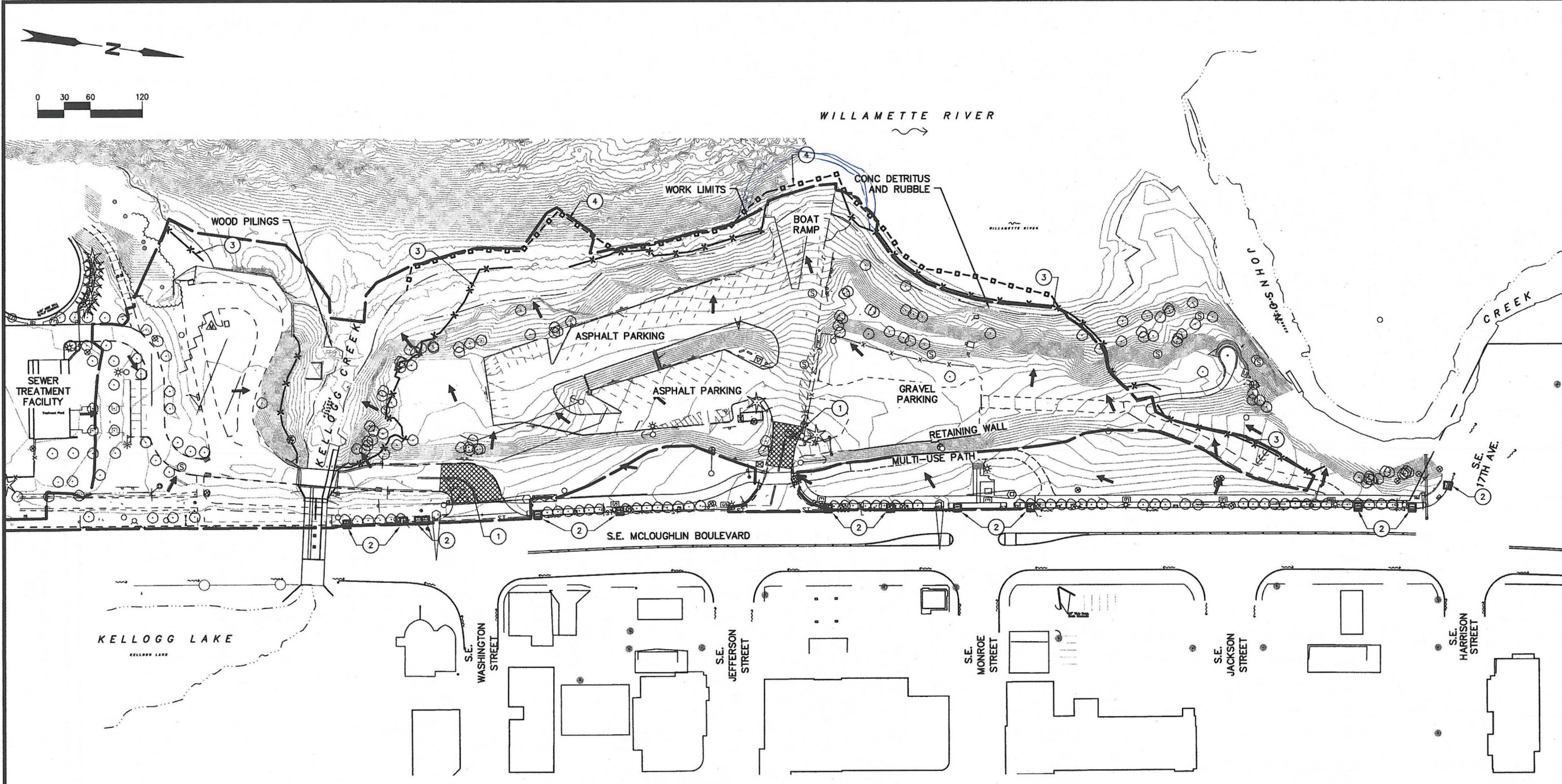
Revision Table with columns: NO., DATE, REVISION BY.

Professional Engineer Seal for Alison M. Wyatt, License No. 125287, State of Oregon. Expires 6/30/14.

SCALE: AS SHOWN. DATE: 4-1-2014. DRN: KEM. CK:

G400. JOB NO. MAEX0000-0021

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PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
3. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
4. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

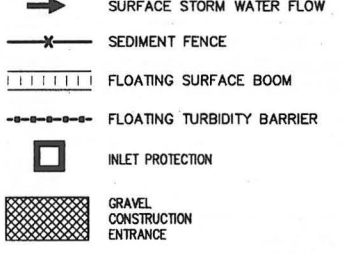
GENERAL NOTES:

1. WORK BELOW ELEVATION 22.0' (NAVD 1988) WILL OCCUR ONLY DURING THE ODFW IN-WATER WORK PERIOD. ALONG THE WILLAMETTE RIVER THE IN-WATER WORK PERIOD IS JULY 1 TO OCTOBER 31. ALONG KELLOGG CREEK THE IN-WATER WORK PERIOD IS JULY 1 TO SEPTEMBER 30.
2. ADHERE TO ALL REQUIREMENTS OF THE ARMY CORPS OF ENGINEERS PERMIT #NWP-2009-19.
3. WATER ENVIRONMENTAL SERVICE (WES) SEWER TREATMENT FACILITY INGRESS/EGRESS SHALL REMAIN OPEN DURING CONSTRUCTION. COORDINATE CONSTRUCTION SCHEDULE WITH THE CITY OF MILWAUKIE AND WES REPRESENTATIVE.

KEYNOTES

- ① GRAVEL CONSTRUCTION ENTRANCE PER DETAIL 3, SHEET C500
- ② INLET PROTECTION PER DETAILS 2 & 4, SHEET C500
- ③ SEDIMENT FENCE PER DETAIL 6, SHEET C500
- ④ FLOATING TURBIDITY BARRIER PER DETAIL 4, SHEET C501

EROSION CONTROL LEGEND

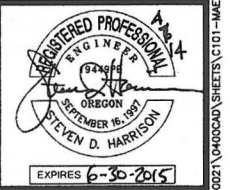


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 Fax: 503.223.2701

CITY OF MILWAUKIE	
DEPARTMENT	SIGNATURE
CITY LANDSCAPE ARCHITECT	
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	
APPROVAL DATE	

PROJECT: MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK
 SHEET TITLE: EROSION & SEDIMENT CONTROL CLEARING & DEMOLITION PHASE
 User: ebf
 Date/Time: Apr 03, 2014 - 2:32pm

NO.	DATE	REVISION



SCALE: 1" = 60'
 DATE: 4-1-2014
 DRN: RFH
 CK: SDH

C101
 JOB NO. MAEX0000-0021

Drawing File: \\P:\



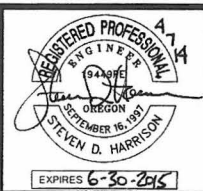
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Fax: 503.223.2701

CITY OF MILWAUKIE		APPROVAL DATE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	SIGNATURE	
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

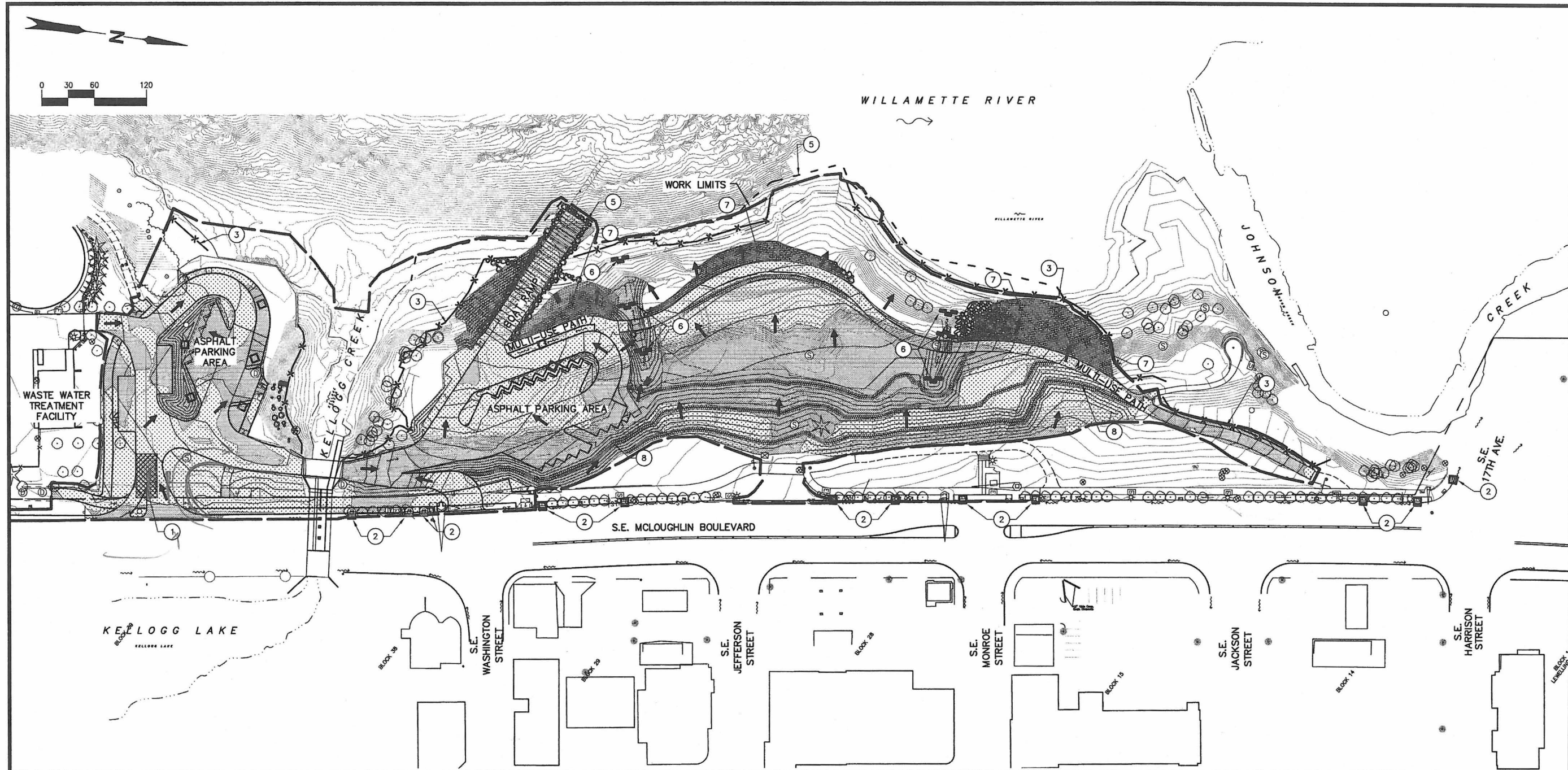
SHEET TITLE: EROSION & SEDIMENT CONTROL CONSTRUCTION PHASE

NO.	DATE	REVISION



SCALE: 1" = 60'
DATE: 4-1-2014
DRN: RFH
CK: SDH

C102
JOB NO. MAEX0000-0021



GRADING, STREET AND UTILITY EROSION AND SEDIMENT CONSTRUCTION NOTES:

- SEE SPECIFICATIONS FOR PERMANENT AND TEMPORARY SEED MIXES.
- SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.
- LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AT APPLICATION RATE SPECIFIED.
- TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
- STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.
- EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
- AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
- SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
- AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERMS OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.
- SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.
- AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.
- USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
- COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC. TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.

AREAS:
TOTAL SITE AREA: 7.25 ACRES
TOTAL DISTURBED AREA: 4.86 ACRES
TOTAL AREA OF CUT: 2.04 ACRES
TOTAL AREA OF FILL: 2.82 ACRES

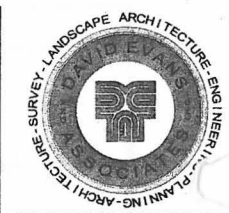
KEYNOTES

- GRAVEL CONSTRUCTION ENTRANCE PER DETAIL 3, SHEET C500
- INLET PROTECTION PER DETAILS 2 & 4, SHEET C500
- SEDIMENT FENCE PER DETAIL 6, SHEET C500
- NOT USED
- FLOATING TURBIDITY BARRIER PER DETAIL 4, SHEET C501
- BIOFILTER BAG CHECK DAM PER DETAIL 1, SHEET C500
- SLOPE MATTING PER DETAIL 5 & 7, SHEET C500
- STRAW WATTLES AT 5' CONTOURS UNTIL LAWN IS ESTABLISHED TO AT LEAST 80% COVERAGE, SEE DETAIL 6, SHEET C501

EROSION CONTROL LEGEND

- CONCENTRATED STORM DRAINAGE FLOW
- SURFACE STORM WATER FLOW
- SEDIMENT FENCE
- FLOATING SURFACE BOOM
- FLOATING TURBIDITY BARRIER
- INLET PROTECTION
- BIO-FILTER BAG SEDIMENT BARRIER
- GRAVEL CONSTRUCTION ENTRANCE
- AREAS OF EXCAVATION
- AREAS OF EMBANKMENT
- MATTING
- STRAW WATTLE

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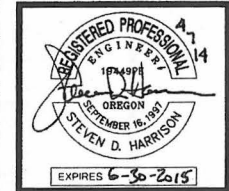


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CITY OF MILWAUKIE		APPROVAL DATE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	SIGNATURE	
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

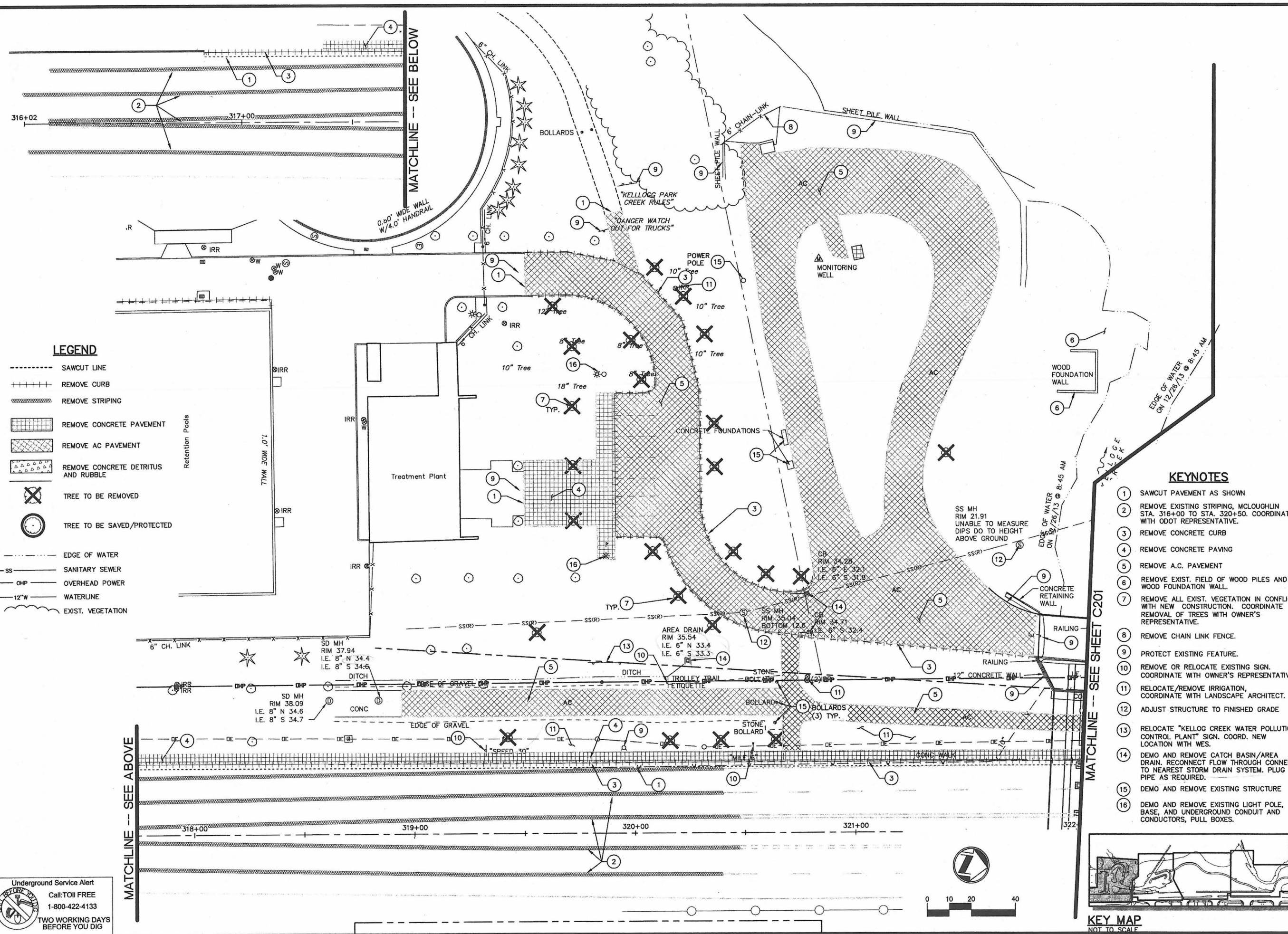
PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: DEMOLITION PLAN

NO.	DATE	REVISION



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: RFH
CK: SDH

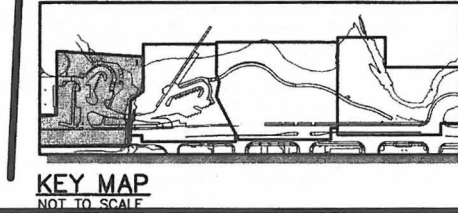
C200
JOB NO. MAEX0000-0021



- KEYNOTES**
- SAWCUT PAVEMENT AS SHOWN
 - REMOVE EXISTING STRIPING, M'LOUGHLIN STA. 316+00 TO STA. 320+50. COORDINATE WITH ODOT REPRESENTATIVE.
 - REMOVE CONCRETE CURB
 - REMOVE CONCRETE PAVING
 - REMOVE A.C. PAVEMENT
 - REMOVE EXIST. FIELD OF WOOD PILES AND WOOD FOUNDATION WALL.
 - REMOVE ALL EXIST. VEGETATION IN CONFLICT WITH NEW CONSTRUCTION. COORDINATE REMOVAL OF TREES WITH OWNER'S REPRESENTATIVE.
 - REMOVE CHAIN LINK FENCE.
 - PROTECT EXISTING FEATURE.
 - REMOVE OR RELOCATE EXISTING SIGN. COORDINATE WITH OWNER'S REPRESENTATIVE.
 - RELOCATE/REMOVE IRRIGATION, COORDINATE WITH LANDSCAPE ARCHITECT.
 - ADJUST STRUCTURE TO FINISHED GRADE
 - RELOCATE "KELLOGG CREEK WATER POLLUTION CONTROL PLANT" SIGN. COORD. NEW LOCATION WITH WES.
 - DEMO AND REMOVE CATCH BASIN/AREA DRAIN. RECONNECT FLOW THROUGH CONNECT TO NEAREST STORM DRAIN SYSTEM. PLUG PIPE AS REQUIRED.
 - DEMO AND REMOVE EXISTING STRUCTURE
 - DEMO AND REMOVE EXISTING LIGHT POLE, BASE, AND UNDERGROUND CONDUIT AND CONDUCTORS, PULL BOXES.

- LEGEND**
- SAWCUT LINE
 - REMOVE CURB
 - REMOVE STRIPING
 - REMOVE CONCRETE PAVEMENT
 - REMOVE AC PAVEMENT
 - REMOVE CONCRETE DETRITUS AND RUBBLE
 - TREE TO BE REMOVED
 - TREE TO BE SAVED/PROTECTED
 - EDGE OF WATER
 - SANITARY SEWER
 - OVERHEAD POWER
 - WATERLINE
 - EXIST. VEGETATION

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CITY OF MILWAUKIE		APPROVAL DATE	
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COMMUNITY DEVELOPMENT			
PUBLIC WORKS			

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	DEMOLITION PLAN

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REVISION	
NO.	DATE



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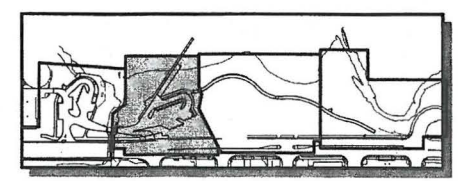
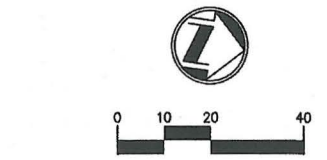
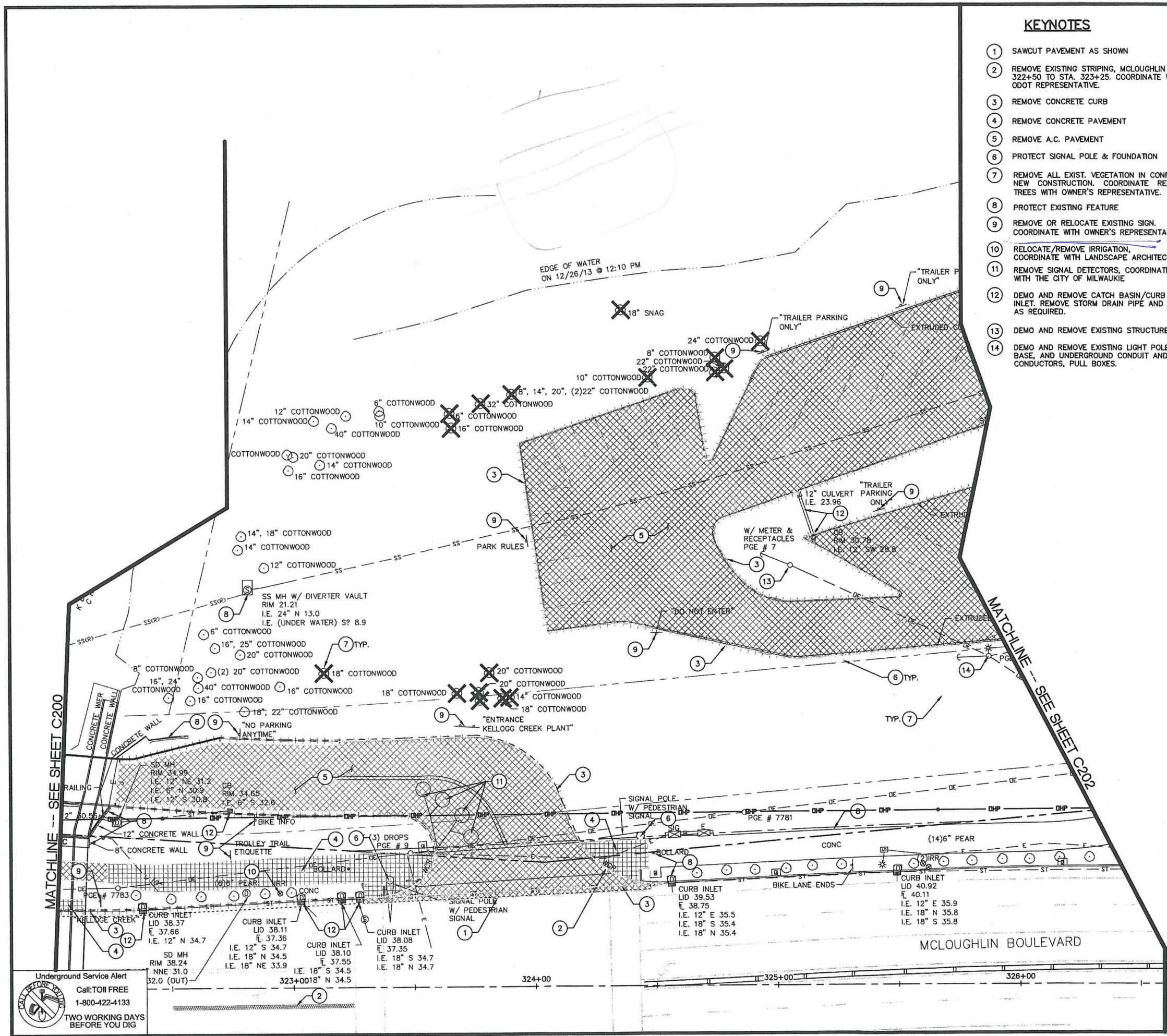
C201
 JOB NO. MAEX0000-0021

KEYNOTES

- 1 SAWCUT PAVEMENT AS SHOWN
- 2 REMOVE EXISTING STRIPING, M'CLOUGHLIN STA. 322+50 TO STA. 323+25. COORDINATE WITH ODOT REPRESENTATIVE.
- 3 REMOVE CONCRETE CURB
- 4 REMOVE CONCRETE PAVEMENT
- 5 REMOVE A.C. PAVEMENT
- 6 PROTECT SIGNAL POLE & FOUNDATION
- 7 REMOVE ALL EXIST. VEGETATION IN CONFLICT WITH NEW CONSTRUCTION. COORDINATE REMOVAL OF TREES WITH OWNER'S REPRESENTATIVE.
- 8 PROTECT EXISTING FEATURE
- 9 REMOVE OR RELOCATE EXISTING SIGN. COORDINATE WITH OWNER'S REPRESENTATIVE.
- 10 RELOCATE/REMOVE IRRIGATION. COORDINATE WITH LANDSCAPE ARCHITECT.
- 11 REMOVE SIGNAL DETECTORS. COORDINATE WITH THE CITY OF MILWAUKIE
- 12 DEMO AND REMOVE CATCH BASIN/CURB INLET. REMOVE STORM DRAIN PIPE AND PLUG AS REQUIRED.
- 13 DEMO AND REMOVE EXISTING STRUCTURE
- 14 DEMO AND REMOVE EXISTING LIGHT POLE, BASE, AND UNDERGROUND CONDUIT AND CONDUCTORS, PULL BOXES.

LEGEND

- SAWCUT LINE
- +++++ REMOVE CURB
- [Hatched Box] REMOVE CONCRETE PAVEMENT
- [Cross-hatched Box] REMOVE AC PAVEMENT
- ⊗ TREE TO BE REMOVED
- ⊙ TREE TO BE SAVED/PROTECTED
- EDGE OF WATER
- SS SANITARY SEWER
- OHP OVERHEAD POWER
- 12"W WATERLINE
- ~~~ EXIST. VEGETATION
- [Box] CATCH BASIN
- ST STORM DRAIN PIPE
- SIGNAL LOOP DETECTORS
- SIGN
- ~~~ VEGETATION
- // OHP ---// UTILITY TO BE REMOVED



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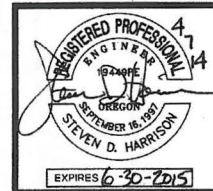


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CITY OF MILWAUKIE	
DEPARTMENT	APPROVAL DATE
CITY LANDSCAPE ARCHITECT	
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	

MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK	
PROJECT	SHEET TITLE
DEMOLITION PLAN	

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
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 CK. SDH

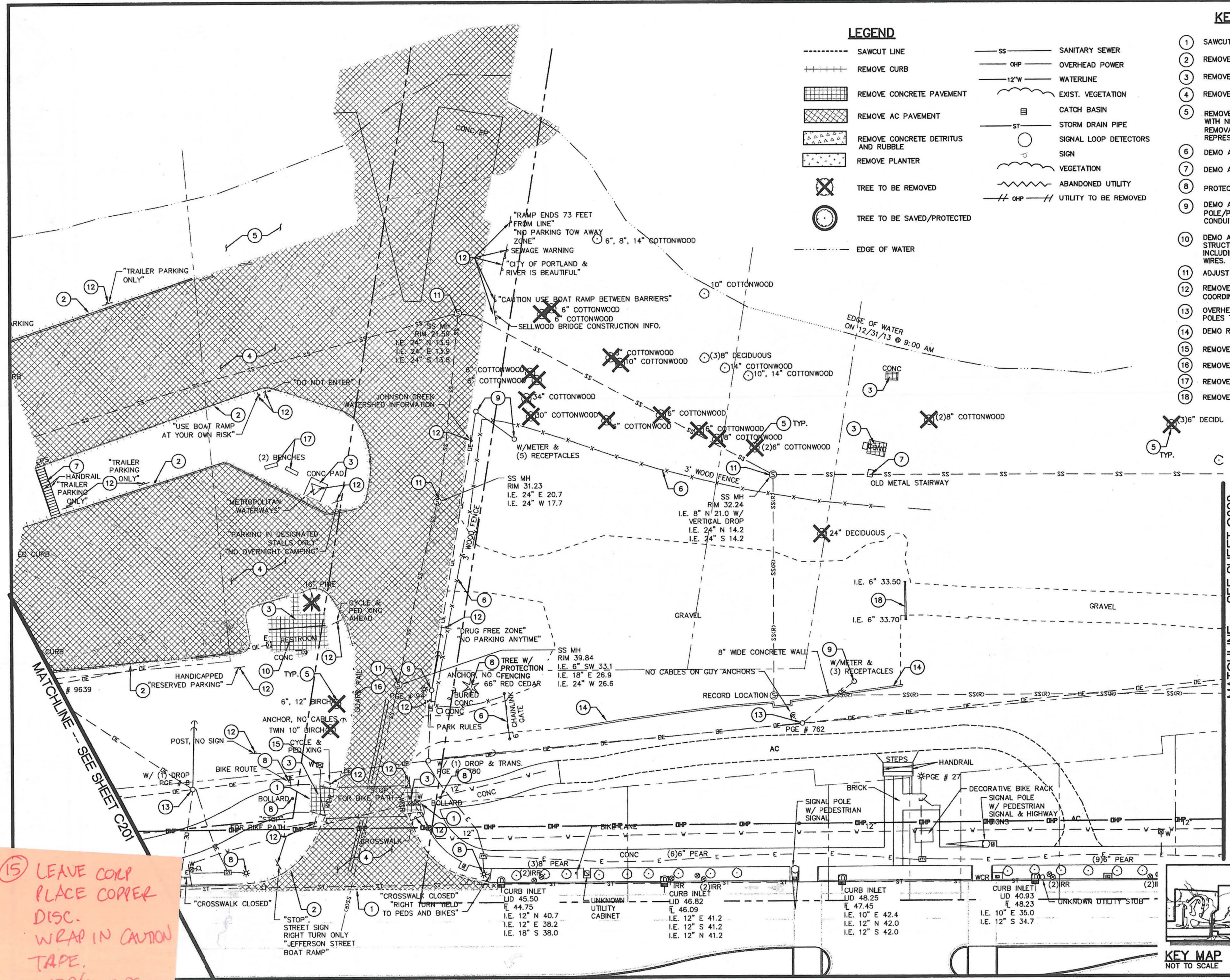
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 JOB NO. MAEX0000-0021

KEYNOTES

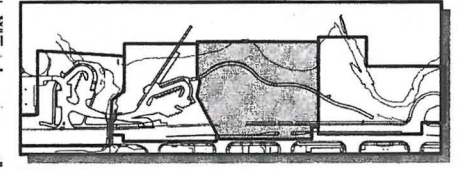
- 1 SAWCUT PAVEMENT AS SHOWN
- 2 REMOVE CONCRETE CURB
- 3 REMOVE CONCRETE PAVING
- 4 REMOVE A.C. PAVEMENT
- 5 REMOVE ALL EXIST. VEGETATION IN CONFLICT WITH NEW CONSTRUCTION. COORDINATE REMOVAL OF TREES WITH OWNER'S REPRESENTATIVE.
- 6 DEMO AND REMOVE SPLIT RAIL FENCE AND GATE
- 7 DEMO AND REMOVE EXISTING STEPS AND RAIL
- 8 PROTECT EXISTING FEATURE.
- 9 DEMO AND REMOVE EXISTING LIGHT POLE/POWER POLE, BASE, AND UNDERGROUND CONDUIT AND CONDUCTORS, PULL BOXES.
- 10 DEMO AND REMOVE EXISTING BUILDING STRUCTURE AND ALL APPURTENANCES INCLUDING ELECTRICAL AND COMMUNICATION WIRES. PLUG SAN. SEWER AT MANHOLE.
- 11 ADJUST STRUCTURE TO FINISHED GRADE
- 12 REMOVE OR RELOCATE EXISTING SIGN. COORDINATE WITH OWNER'S REPRESENTATIVE.
- 13 OVERHEAD POWER LINE AND ASSOCIATED POLES TO BE RELOCATED BY OTHERS.
- 14 DEMO REMOVE EXISTING RETAINING WALL
- 15 REMOVE EXISTING WATER SERVICE
- 16 REMOVE EXISTING GUARD RAIL AND POSTS.
- 17 REMOVE EXISTING BENCHES
- 18 REMOVE EXISTING STORM DRAIN CULVERT

LEGEND

- SAWCUT LINE
- ++++ REMOVE CURB
- [Grid Pattern] REMOVE CONCRETE PAVEMENT
- [Cross-hatch Pattern] REMOVE AC PAVEMENT
- [Dotted Pattern] REMOVE CONCRETE DETRITUS AND RUBBLE
- [Stippled Pattern] REMOVE PLANTER
- ⊗ TREE TO BE REMOVED
- ⊙ TREE TO BE SAVED/PROTECTED
- EDGE OF WATER
- SS SANITARY SEWER
- OHP OVERHEAD POWER
- 12"W WATERLINE
- Wavy Line EXIST. VEGETATION
- ST STORM DRAIN PIPE
- SIGNAL LOOP DETECTORS
- SIGN
- Wavy Line VEGETATION
- ABANDONED UTILITY
- // OHP //--- UTILITY TO BE REMOVED



MATCHLINE -- SEE SHEET C203



KEY MAP
 NOT TO SCALE

(15) LEAVE COPR
 PLACE COPR
 DISC.
 WRAP IN CAUTION
 TAPE.
 OP'S GPS

200000021\CADD\CADD SHEETS\C200-MAEX21-DEM.DWG Date/Time: Mar 27, 2014 - 2:03 pm User: adh



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CITY OF MILWAUKIE	
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COMMUNITY DEVELOPMENT	
PUBLIC WORKS	

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	DEMOLITION PLAN

NO.	DATE	REVISION	BY



SCALE:	AS SHOWN
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DRN.	RFH
CK.	SDH

C203
JOB NO. MAEX0000-0021

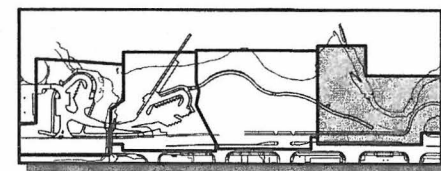
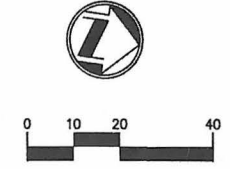
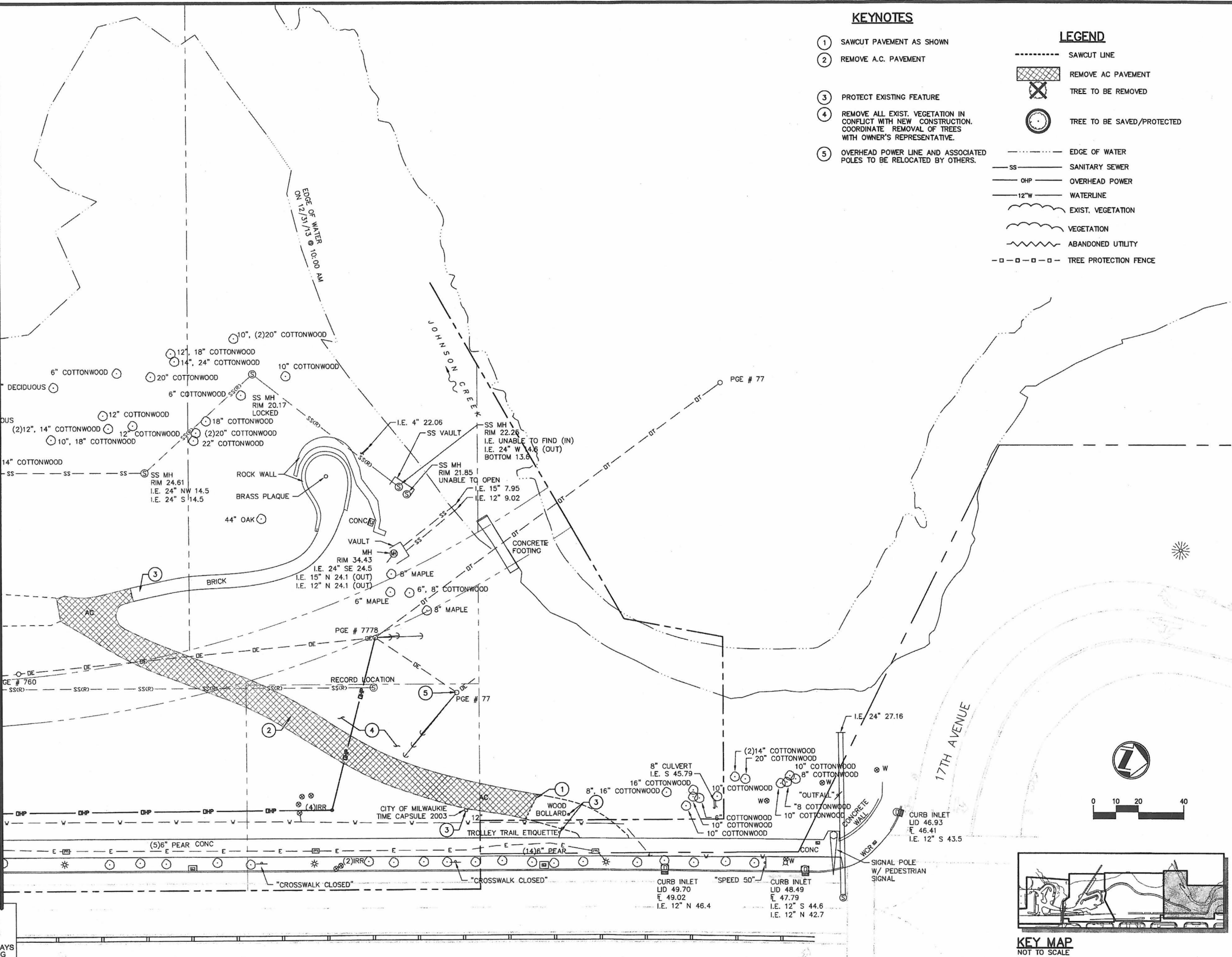
KEYNOTES

- 1 SAWCUT PAVEMENT AS SHOWN
- 2 REMOVE A.C. PAVEMENT
- 3 PROTECT EXISTING FEATURE
- 4 REMOVE ALL EXIST. VEGETATION IN CONFLICT WITH NEW CONSTRUCTION. COORDINATE REMOVAL OF TREES WITH OWNER'S REPRESENTATIVE.
- 5 OVERHEAD POWER LINE AND ASSOCIATED POLES TO BE RELOCATED BY OTHERS.

LEGEND

- SAWCUT LINE
- REMOVE AC PAVEMENT
- TREE TO BE REMOVED
- TREE TO BE SAVED/PROTECTED
- EDGE OF WATER
- SANITARY SEWER
- OVERHEAD POWER
-

MATCHLINE -- SEE SHEET C202



KEY MAP
NOT TO SCALE

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 1-800-422-4133
 TWO WORKING DAYS BEFORE YOU DIG

Drawing File: \\Pdata1\Project\MAEX0000\0021\0-0000\0000\0021-DEM.DWG Date/Time: Mar 27, 2014 - 2:03pm User: dth



2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

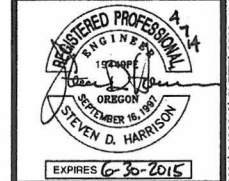
KEYNOTES

- ① CONNECT TO EXISTING WATER MAIN, PROVIDE 1 1/2" METER WITHIN STANDARD METER BOX. SEE DETAIL 2, SHEET C506
- ② CONSTRUCT WATER SERVICE BACKFLOW DEVICE WITHIN BOX. SEE DETAIL 4, SHEET C506
- ③ CONSTRUCT 1 1/2" WATER SERVICE. PROVIDE A MINIMUM OF 30" OF COVER. SEE TRENCH SECTION DETAIL 1, SHEET C506
- ④ INSTALL 15 L.F. - 4" DIAMETER SANITARY SEWER PIPE. S=0.0200 MIN. CONNECT TO EXISTING 24" SANITARY SEWER, SEE SEWER TAP DETAIL 6, SHEET C506

CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

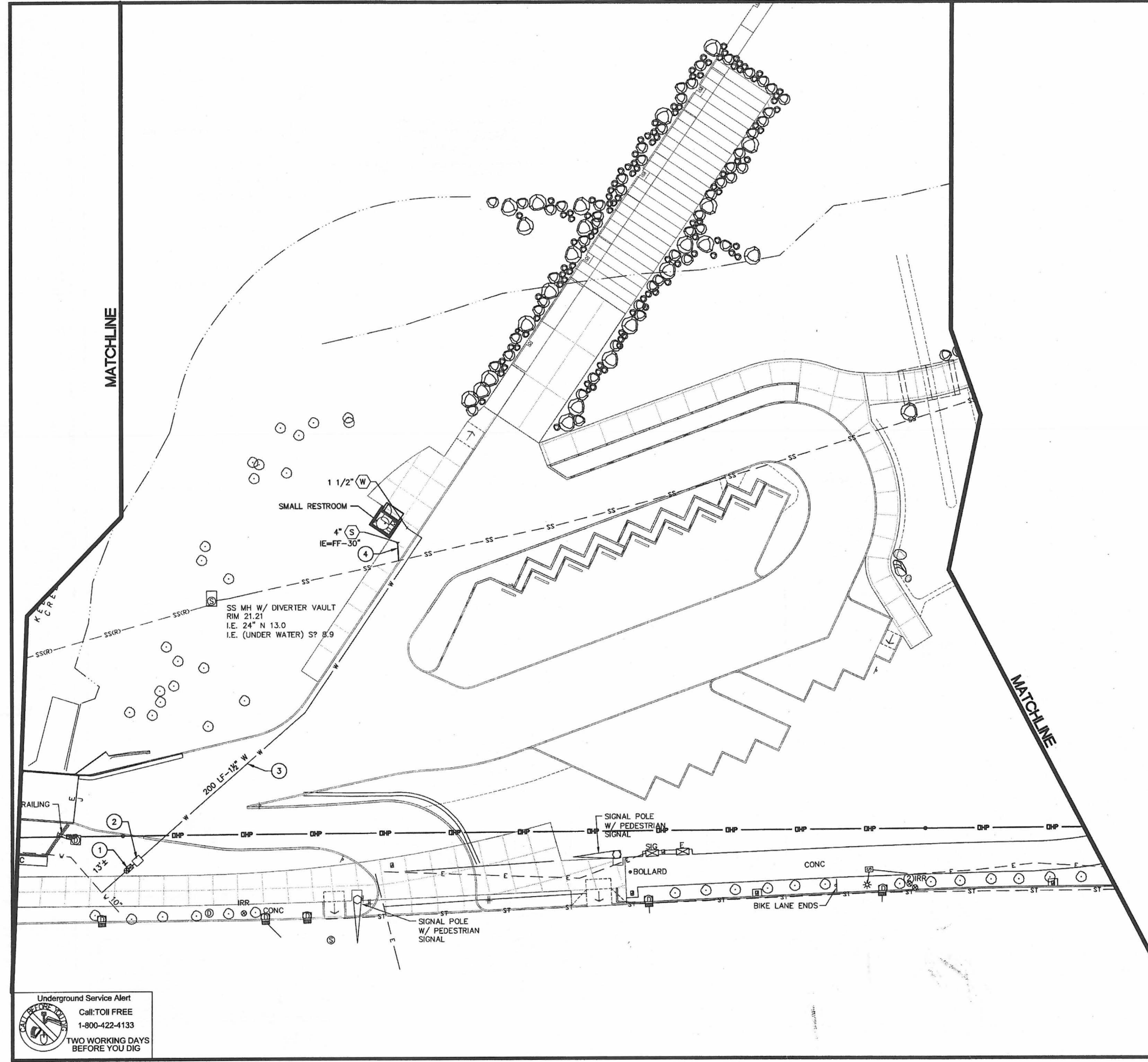
PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	ON-SITE UTILITY PLAN

NO.	DATE	REVISION	BY

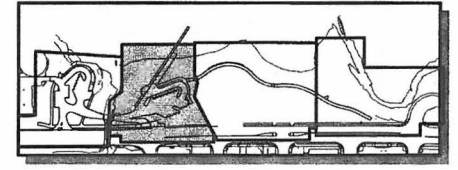
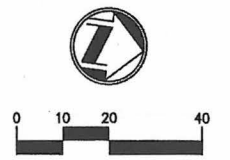


SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	RFH
CK.	SDH

C300	
JOB NO.	MAEX0000-0021



- LEGEND**
- ⊕ W X" CONNECT WATER TO COLD WATER SYSTEM. SIZE AS NOTED. SEE MECHANICAL PLANS FOR CONTINUATION.
 - ⊕ S X" IE=XXX.XX CONNECT SEWER TO WASTE LINE. SIZE AND IE AS NOTED. SEE MECHANICAL PLANS FOR CONTINUATION.
 - SS00 SANITARY SEWER
 - W WATER SERVICE LINE
 - WATER METER
 - WATER VALVE
 - BACKFLOW DEVICE BOX
 - OHP OVERHEAD POWER LINE



KEY MAP
NOT TO SCALE

Underground Service Alert
 Call: TOLL FREE
 1-800-422-4133
 TWO WORKING DAYS
 BEFORE YOU DIG

Drawing File: \\Pc\... Date/Time: Mar 27, 2014 - 2:34pm User: sdb



SHEET CONTROL POINT TABLE

POINT NO.	NORTHING	EASTING	ELEVATION
26	654163.65	7652914.28	38.40
102	654381.14	7652885.70	33.90
51	654383.32	7653071.26	36.23
32	654496.80	7653056.31	34.35
25	654364.23	7653020.83	35.90
9	654485.60	7653029.87	34.56

SURVEY VERTICAL CONTROL IS BASED ON NAVD 1988 DATUM.

GRADING ABBREVIATIONS

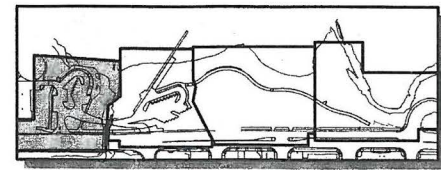
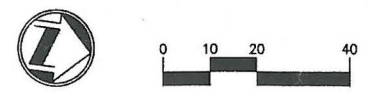
- 1/2 1/2 CURVE LENGTH/ANGLE
 - 1/4 1/4 CURVE LENGTH/ANGLE
 - FFE FINISH FLOOR ELEVATION
 - FG FINISH GRADE
 - GB GRADE BREAK
 - HP HIGH POINT
 - LP LOW POINT
 - MID MIDPOINT
 - PC POINT OF CURVATURE
 - PCC POINT OF COMPOUND CURVATURE
 - PRC POINT OF REVERSE CURVATURE
 - PT POINT OF TANGENCY
 - TC TOP OF CURB
- NOTE: SPOT ELEVATIONS SHOWN HEREON ARE TO FINISHED PAVEMENT SURFACE UNLESS INDICATED OTHERWISE

DRAINAGE SYSTEM KEYNOTES

- ① AREA DRAIN, SEE DETAIL 5, SHEET C504
- ② DITCH INLET, SEE DETAIL 4, SHEET C504
- ⑥ OUTFALL RIPRAP, SEE DETAIL 4, SHEET C505
- ⑦ STORM DRAINAGE PIPE PER TRENCH BEDDING AND BACKFILL DETAIL 1, SHEET C506
- ⑩ MANHOLE PER DETAIL 6, SHEET C505

STRUCTURE SCHEDULE

STRUCTURE	RIM ELEV	I.E. IN ELEV	I.E. OUT ELEV	NORTHING	EASTING
DI#1	31.50		29.33(E)	654341.59	7652924.95
DI#2	31.50	28.19(W)	28.00(N)	654356.98	7652983.14
AD#1	32.50		29.83(E)	654422.13	7652867.41
AD#2	32.50	28.61(W)	28.50(E)	654423.00	7652928.59
AD#3	32.50		28.50(W)	654417.02	7652984.83
AD#4	36.75		35.00(S)	654261.10	7653094.69
MH#1	33.53	26.42(S) 26.50(W) 26.50(E)	26.30(N)	654423.00	7652928.59
OUTFALL#1			25.82(S)	654453.64	7652952.04



① GRADING AND DRAINAGE PLAN
1" = 20'



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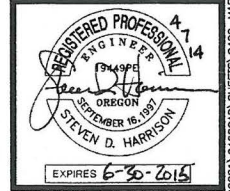
CITY OF MILWAUKIE

DEPARTMENT	SIGNATURE	APPROVAL DATE
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

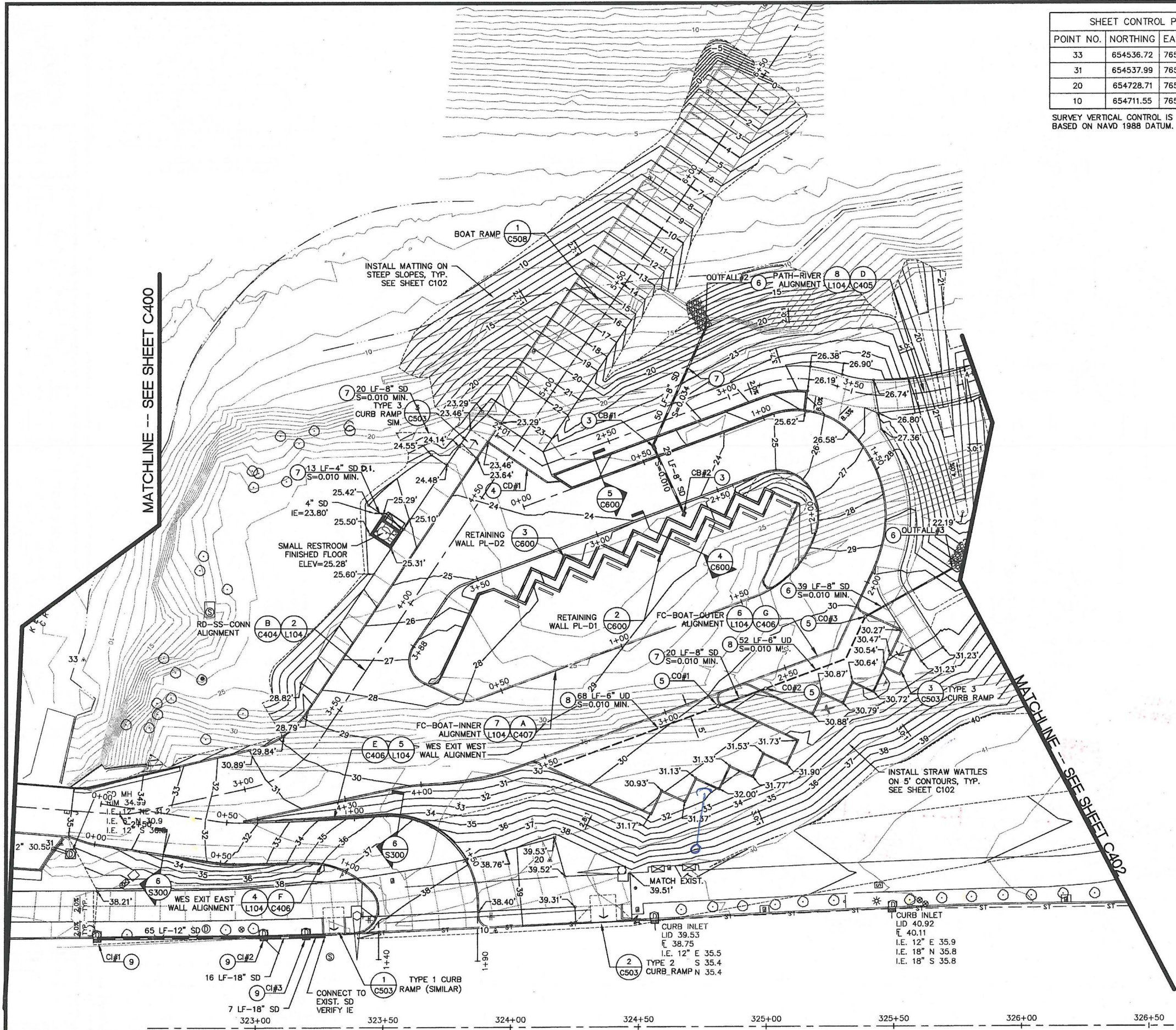
SHEET TITLE: GRADING AND DRAINAGE PLAN

NO.	DATE	REVISION



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: RFH
CK: SDH

C400
JOB NO. MAEX0000-0021



SHEET CONTROL POINT TABLE			
POINT NO.	NORTHING	EASTING	ELEVATION
33	654536.72	7652980.57	8.85
31	654537.99	7653053.09	34.63
20	654728.71	7653032.89	38.66
10	654711.55	7653063.02	38.98

SURVEY VERTICAL CONTROL IS BASED ON NAVD 1988 DATUM.

GRADING ABBREVIATIONS

- 1/2 1/2 CURVE LENGTH/ANGLE
- 1/4 1/4 CURVE LENGTH/ANGLE
- FFE FINISH FLOOR ELEVATION
- FG FINISH GRADE
- GB GRADE BREAK
- HP HIGH POINT
- LP LOW POINT
- MID MIDPOINT
- PC POINT OF CURVATURE
- PCC POINT OF COMPOUND CURVATURE
- PRC POINT OF REVERSE CURVATURE
- PT POINT OF TANGENCY
- TC TOP OF CURB

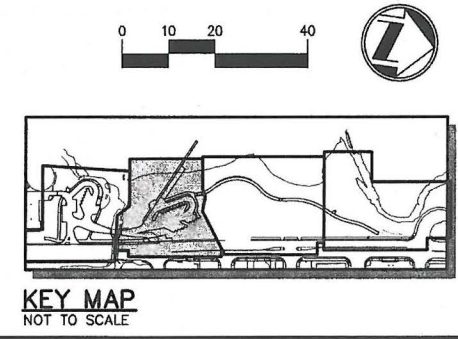
NOTE: SPOT ELEVATIONS SHOWN HEREON ARE TO FINISHED PAVEMENT SURFACE UNLESS INDICATED OTHERWISE

DRAINAGE SYSTEM KEYNOTES

- 1 AREA DRAIN, SEE DETAIL 5, SHEET C504
- 3 CATCH BASIN, SEE DETAIL 5, SHEET C505
- 4 CHANNEL DRAIN, SEE DETAIL 1, SHEET C505
- 5 CLEANOUT, SEE DETAIL 2, SHEET C505
- 6 OUTFALL RIPRAP, SEE DETAIL 4, SHEET C505
INSTALL RIPRAP DOWN TO BOTTOM OF SLOPE FROM OUTFALL. INSTALL ENERGY DISPERSING DEVICE AT END OF PIPE.
- 7 STORM DRAINAGE PIPE PER TRENCH BEDDING AND BACKFILL DETAIL 1, SHEET C506
- 8 UNDER DRAIN PERFORATED PIPE PER DETAIL 3, SHEET C505
- 9 INSTALL CURB INLET PER DETAILS 2 AND 3, SHEET C504

DRAINAGE STRUCTURE SCHEDULE

STRUCTURE	RIM ELEV	INVERT ELEV	NORTHING	EASTING
CB#1	21.68	18.68(W) 18.71(E)	654,746.38	7,652,867.42
CB#2	23.20	19.00(W)	654,761.55	7,652,891.54
CO#1	30.27	28.10	654,785.18	7,652,964.17
CO#2	30.41	27.90	654,802.90	7,652,954.68
CO#3	30.10	27.38	654,837.63	7,652,921.50
OUTFALL#2	-	17.00	654,759.78	7,652,818.62
OUTFALL#3	-	27.00	654,852.58	7,652,910.26
CD#1 (26 L.F.)	25.73	25.10	654,635.31	7,652,949.54
	25.60	24.97	654,660.95	7,652,945.25
CI#1	38.31	34.7(N)	654,556.98	7,653,086.35
CI#2	38.10	34.7(S)	654,621.64	7,653,076.66
		34.5(N)		
CI#3	38.09	34.5(N,S)	654,638.05	7,653,073.90



1 GRADING AND DRAINAGE PLAN
1" = 20'

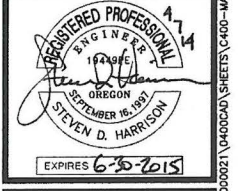


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CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	DEPARTMENT	
MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK	CITY LANDSCAPE ARCHITECT	
	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: GRADING AND DRAINAGE PLAN

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: RFH
CK: SDH

C401
JOB NO. MAEX0000-0021

Date/Time: Apr 07, 2014 - 3:00pm User: gbf

SHEET CONTROL POINT TABLE			
POINT NO.	NORTHING	EASTING	ELEVATION
103	655253.55	7653026.61	48.46
35	655351.39	7652882.99	46.22
22	655297.80	7652958.51	48.79
21	655017.93	7652993.94	43.25
12	655300.32	7652981.98	48.45

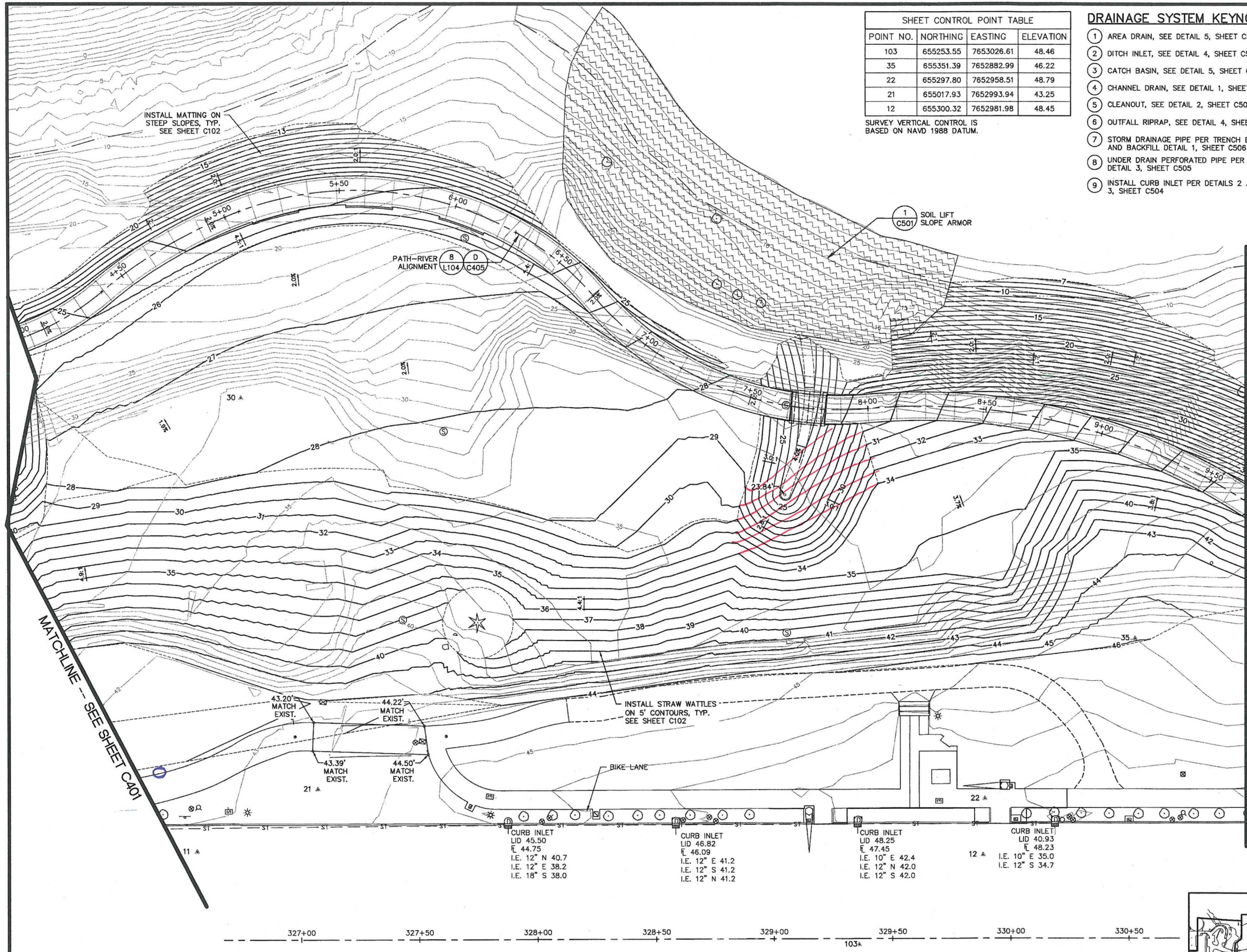
SURVEY VERTICAL CONTROL IS BASED ON NAVD 1988 DATUM.

DRAINAGE SYSTEM KEYNOTES

- ① AREA DRAIN, SEE DETAIL 5, SHEET C504
- ② DITCH INLET, SEE DETAIL 4, SHEET C504
- ③ CATCH BASIN, SEE DETAIL 5, SHEET C505
- ④ CHANNEL DRAIN, SEE DETAIL 1, SHEET C505
- ⑤ CLEANOUT, SEE DETAIL 2, SHEET C505
- ⑥ OUTFALL RIPRAP, SEE DETAIL 4, SHEET C505
- ⑦ STORM DRAINAGE PIPE PER TRENCH BEDDING AND BACKFILL DETAIL 1, SHEET C506
- ⑧ UNDER DRAIN PERFORATED PIPE PER DETAIL 3, SHEET C505
- ⑨ INSTALL CURB INLET PER DETAILS 2 AND 3, SHEET C504

LEGEND

- ▣ AREA DRAIN
- ▣ CATCH BASIN
- DITCH INLET
- CLEANOUT
- MANHOLE
- PIPE
- UNDERDRAIN
- ▨ RIPRAP SCOUR PROTECTION
- - - 25' EXISTING CONTOUR
- - - 34' PROPOSED CONTOUR
- 38.25' FINISH GRADE SPOT ELEVATION
- ▨ SOIL LIFT SLOPE ARMOR

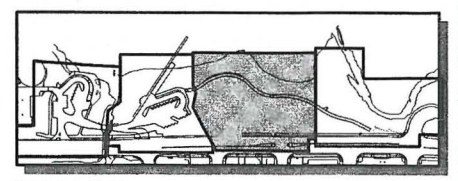
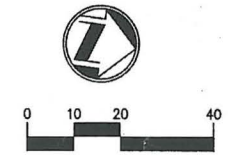


① SOIL LIFT SLOPE ARMOR C501

MATCHLINE -- SEE SHEET C403

MATCHLINE -- SEE SHEET C401

- CURB INLET
LID 45.50
E 44.75
I.E. 12° N 40.7
I.E. 12° E 38.2
I.E. 18° S 38.0
- CURB INLET
LID 46.82
E 46.09
I.E. 12° E 41.2
I.E. 12° S 41.2
I.E. 12° N 41.2
- CURB INLET
LID 48.25
E 47.45
I.E. 10° E 42.4
I.E. 12° N 42.0
I.E. 12° S 42.0
- CURB INLET
LID 40.93
E 48.23
I.E. 10° E 35.0
I.E. 12° S 34.7



① GRADING AND DRAINAGE PLAN
1" = 20'



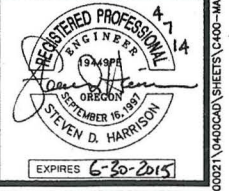
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CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	PUBLIC WORKS
	ARCHITECT	COMMUNITY DEVELOPMENT

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: GRADING AND DRAINAGE PLAN

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: RFH
CK: SDH

C402
JOB NO. MAEX0000-0021

SHEET CONTROL POINT TABLE			
POINT NO.	NORTHING	EASTING	ELEVATION
34	655534.02	7652757.03	34.63
24	655791.68	7652885.23	47.50
23	655553.28	7652919.47	51.40
13	655554.88	7652938.17	51.08

SURVEY VERTICAL CONTROL IS
BASED ON NAVD 1988 DATUM.

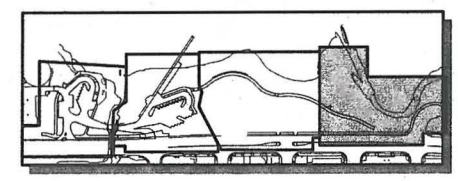
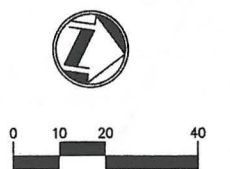
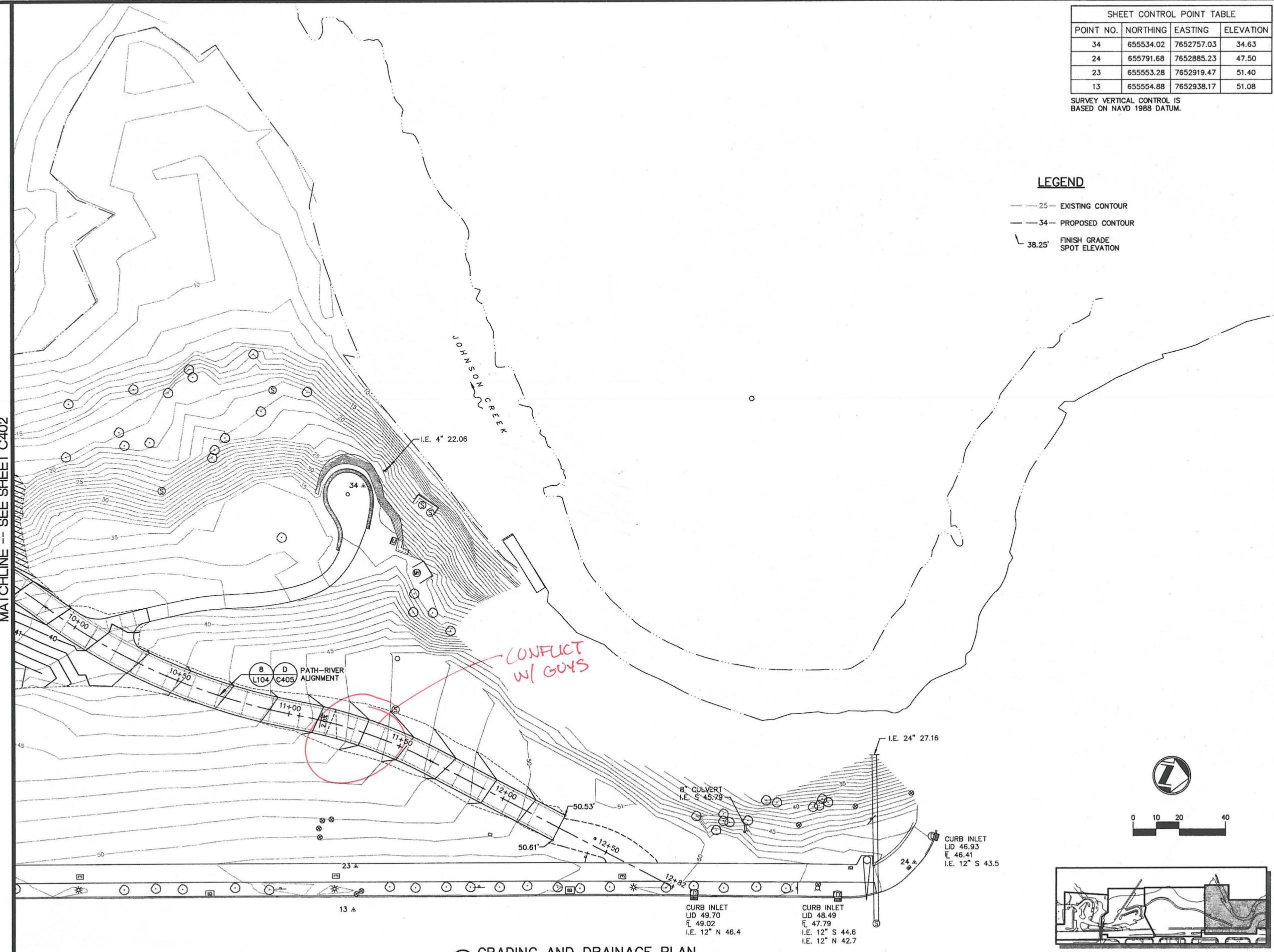


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LEGEND

- 25 --- EXISTING CONTOUR
- 34 --- PROPOSED CONTOUR
- 38.25' FINISH GRADE SPOT ELEVATION

MATCHLINE -- SEE SHEET C402



1 GRADING AND DRAINAGE PLAN
1" = 20'

KEY MAP
NOT TO SCALE

CITY OF MILWAUKIE		SIGNATURE	APPROVAL DATE
DEPARTMENT	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	GRADING AND DRAINAGE PLAN

NO.	DATE	REVISION	BY



SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	RFH
CK.	SDH

C403	
JOB NO.	MAEX0000-0021

Date/Time: Apr 03, 2014 - 1:55pm User: sdh



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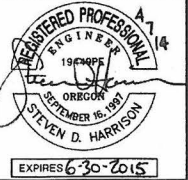
CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	APPROVAL DATE
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT
MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE

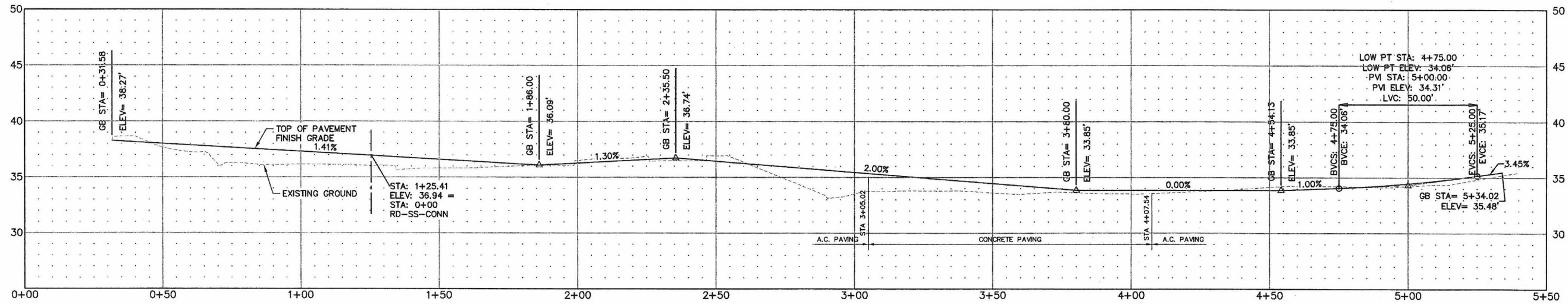
PROFILES

NO.	DATE	REVISION	BY

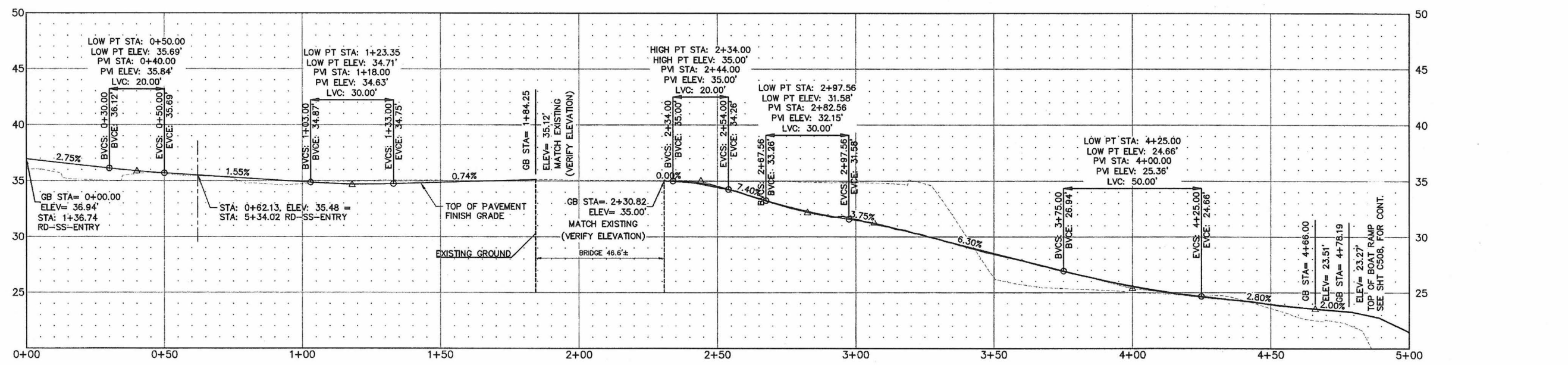


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DATE: 4-1-2014
DRN: RFH
CK: SDH

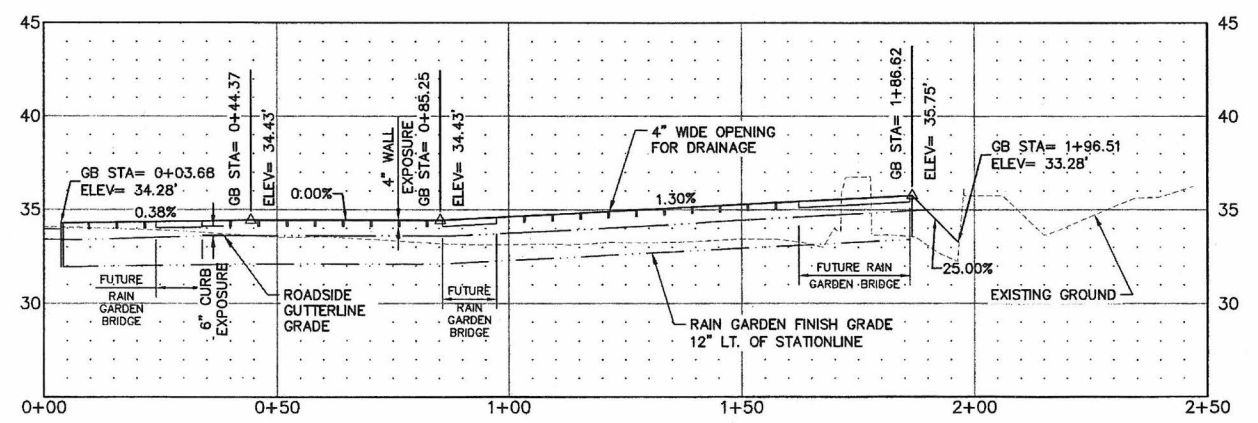
C404
JOB NO. MAEX0000-0021



A
ALIGNMENT PROFILE RD-SS-ENTRY
1" = 20' HORIZ. - 1" = 5' VERT.

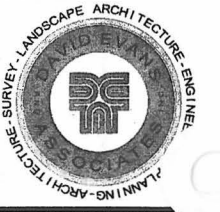


B
ALIGNMENT PROFILE RD-SS-CONN
1" = 20' HORIZ. - 1" = 5' VERT.



C
ALIGNMENT PROFILE WALL-WALK
1" = 20' HORIZ. - 1" = 5' VERT.

Drawing File: \\parks1\project\maex\0000\0021\04000\01\04000\01\SHEETS\C404-MAEX01-PROF.dwg Date/Time: Mar 27, 2014 - 3:06pm User: sdh

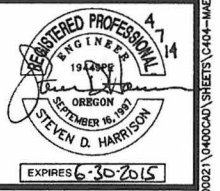


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CITY OF MILWAUKIE		SIGNATURE	APPROVAL DATE
DEPARTMENT	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

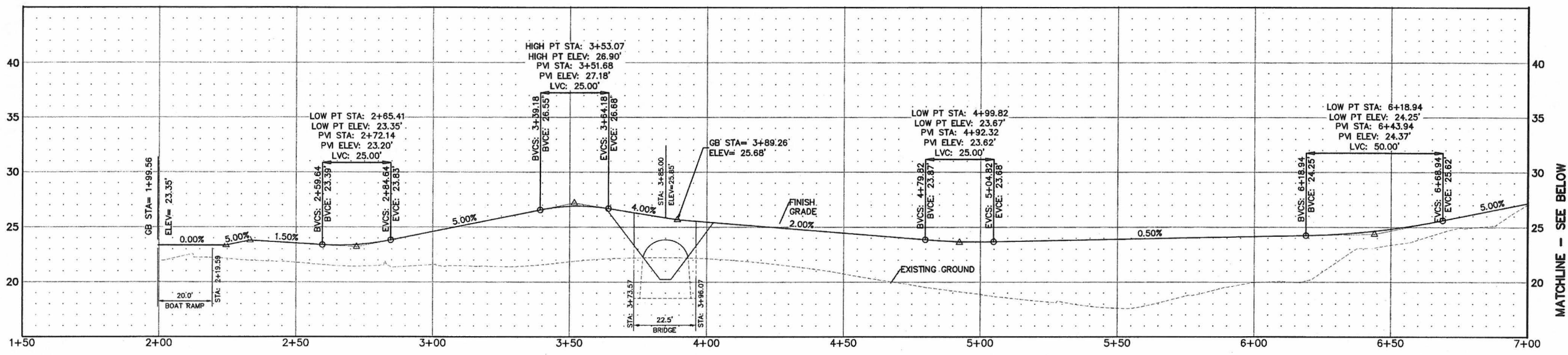
PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	PROFILES

NO.	DATE	REVISION	BY

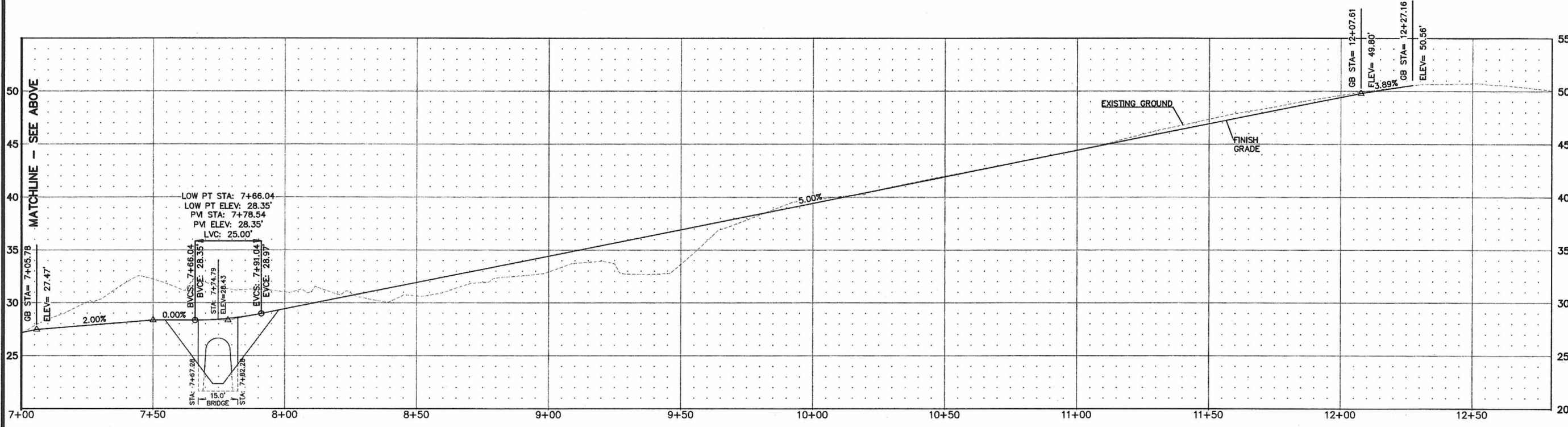


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CK. SDH

C405
JOB NO. MAEX0000-0021



MATCHLINE - SEE BELOW



**ALIGNMENT PROFILE
PATH-RIVER**
1" = 20' HORIZ. - 1" = 5' VERT.

Date/Time: Mar 27, 2014 - 3:03pm User: sdh

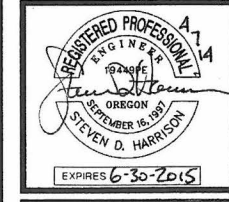


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CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	DEPARTMENT	CITY LANDSCAPE ARCHITECT
	COMMUNITY DEVELOPMENT	PUBLIC WORKS

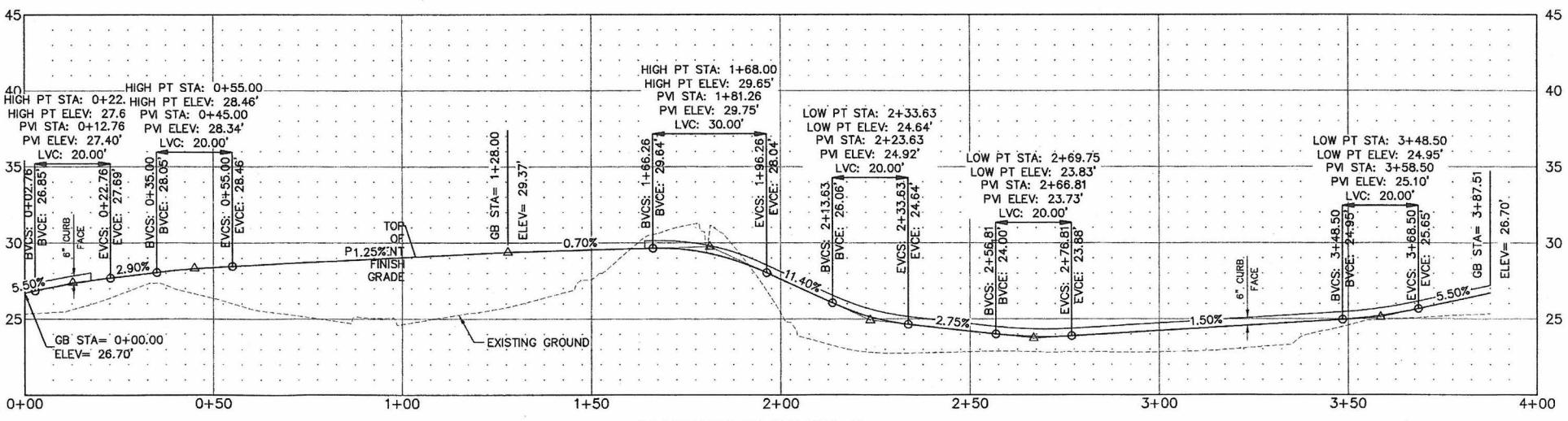
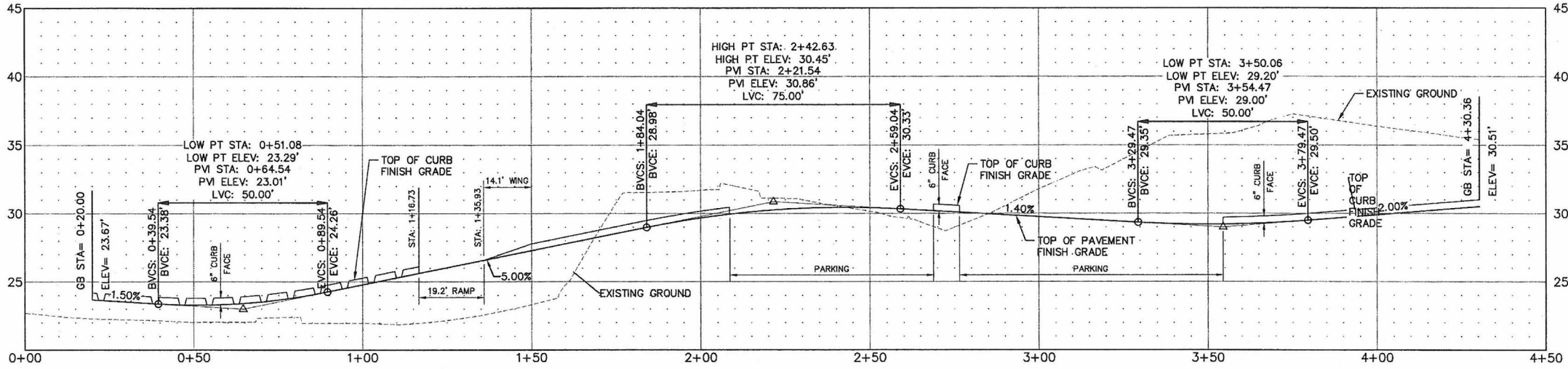
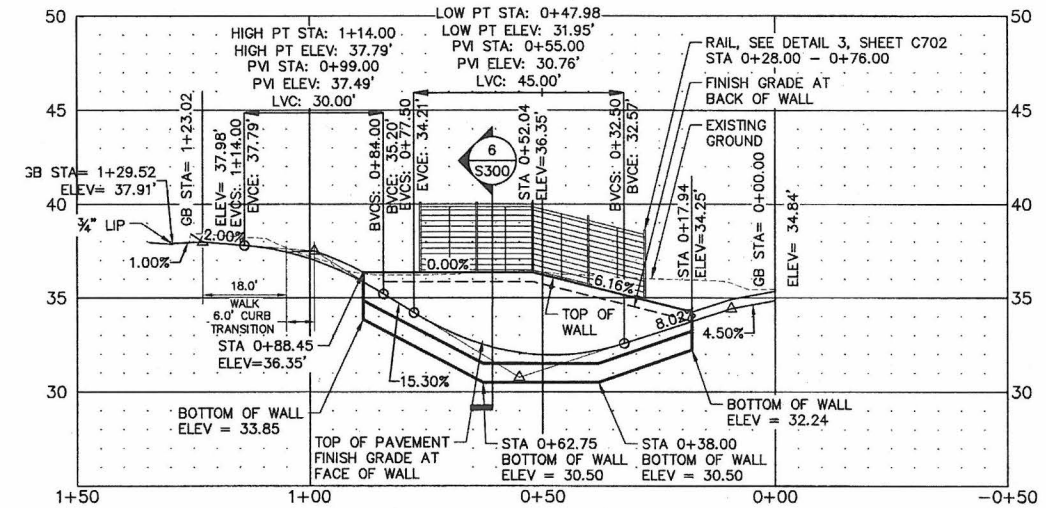
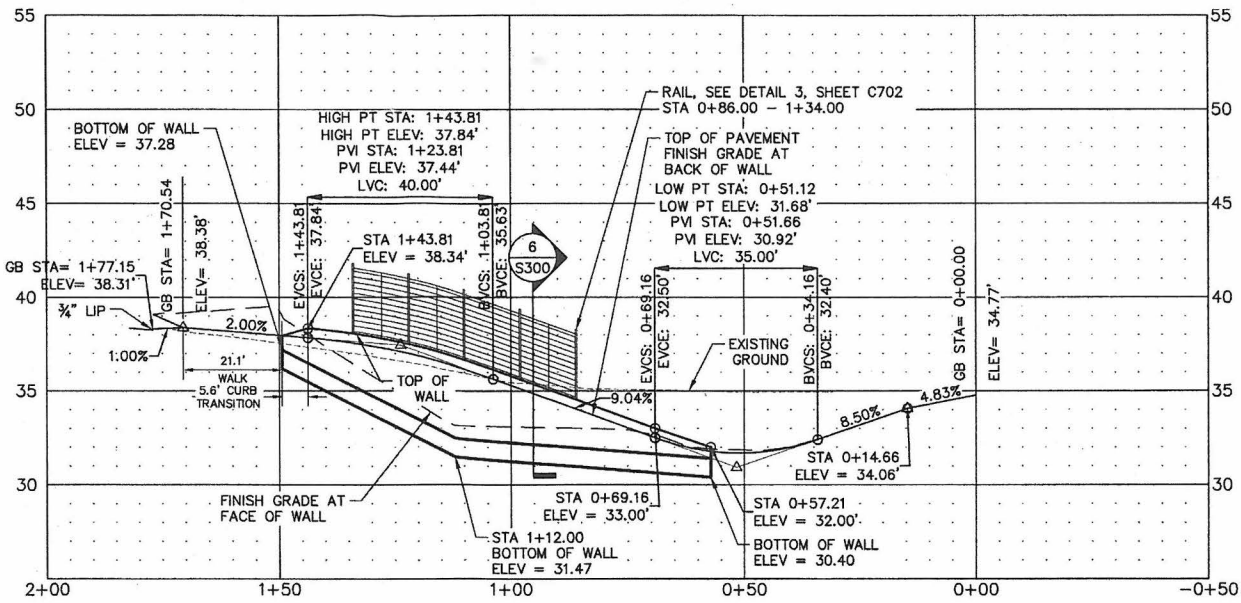
PROJECT MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK	PROFILES	
	SHEET TITLE	
	DATE	
	USER	

NO.	DATE	REVISION	BY

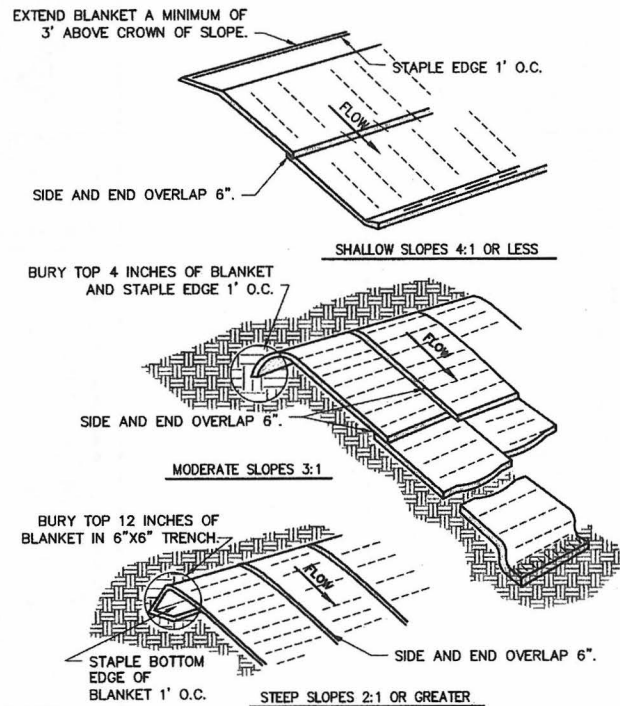


SCALE:	AS SHOWN
DATE:	4-1-2014
DRN:	RPH
CK:	SDH

C406
 JOB NO. MAEX0000-0021



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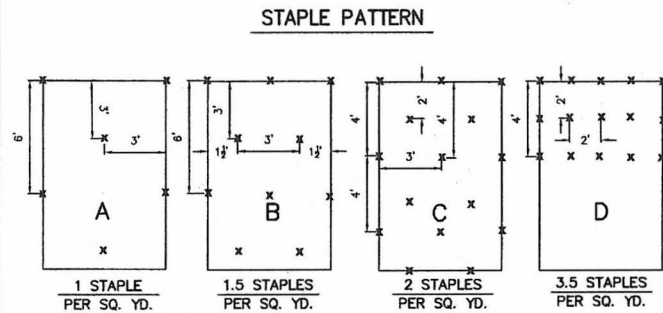


MATERIAL:
 PROVIDE MATTING THAT IS 100% BIODEGRADABLE COIR TWINE HAVING NOT LESS THAN THE FOLLOWING CHARACTERISTICS.

- WEIGHT 23 OZ/SY
- THICKNESS 0.35 INCHES
- OPEN AREA 50%
- TENSILE STRENGTH DRY 1740 LBS/FT
- TENSILE STRENGTH DRY (CROSS DIRECTION) 1176 LBS/FT

- NOTES:**
1. ON SHALLOW SLOPES BLANKETS MAY BE APPLIED ACROSS THE SLOPE.
 2. ALL BLANKET STAPLE REQUIRED AS PER TABLE.

7 SLOPE MATTING - INSTALLATION
 N.T.S.

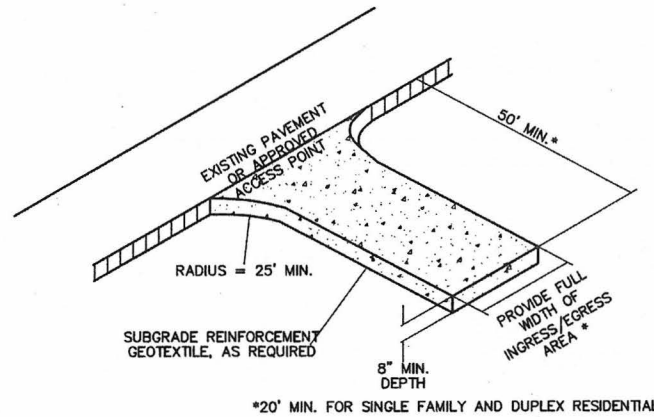


LENGTH AND SLOPE TABLE

300	B	C				
275						
250						
225		C	C	C		D
200						
175		B				
150	A					
125						
100		A	B			
75						
50						
25						
FT	4:1	3:1	2:1	1:1	LOW FLOW CHANNEL	MED/HIGH FLOW CONTROL

*MINIMUM STAPLE PATTERN GUIDE AND RECOMMENDATION FOR SLOPE AND CHANNEL APPLICATION.

5 SLOPE MATTING - STAPLE TABLE
 N.T.S.



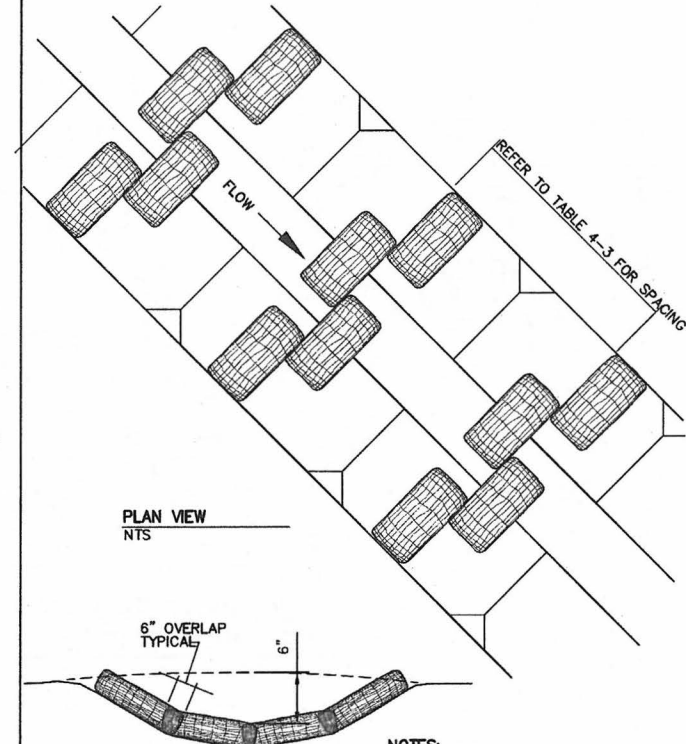
NOTES:

DIMENSIONS:

SINGLE FAMILY:
 20' LONG BY 20' WIDE
 8" DEEP OF 3/4" MINUS CLEAN ROCK.

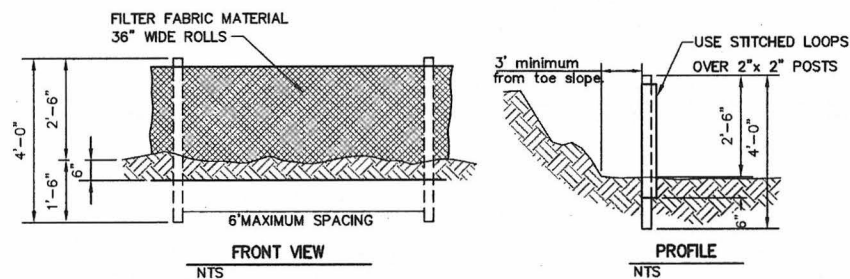
COMMERCIAL:
 50' LONG BY 20' WIDE
 3-6" CLEAN ROCK,
 GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

3 CONSTRUCTION ENTRANCE
 N.T.S.

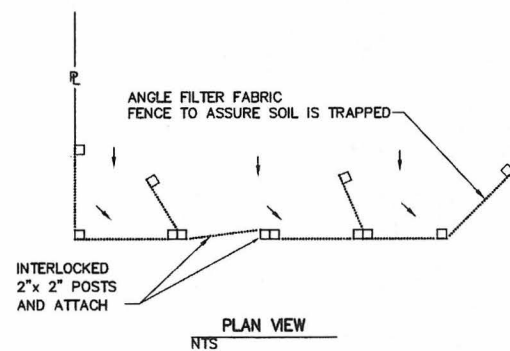


- NOTES:**
1. STAKING OF BAGS REQUIRED USING (2) 1"x2" WOOD STAKES OR APPROVED EQUAL PER BAG.
 2. SURFACE MUST BE SMOOTH BEFORE APPLICATION.

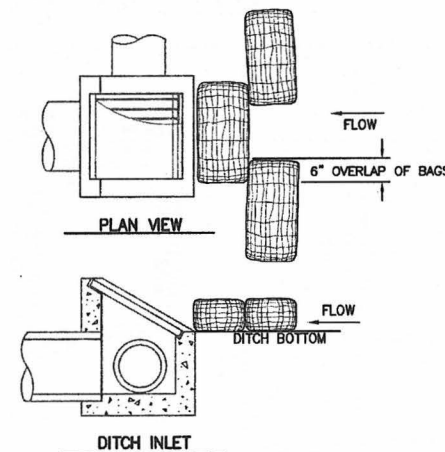
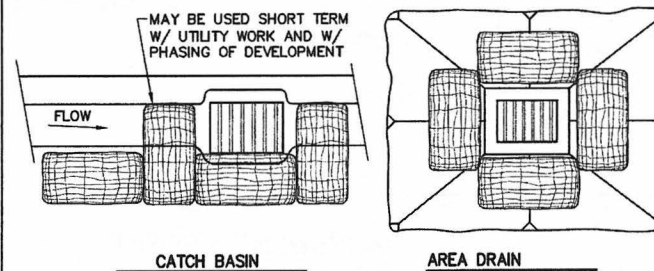
1 BIOFILTER BAG CHECK DAM
 N.T.S.



- NOTES:**
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
 2. 2"x2" FIR, PINE OR STEEL FENCE POSTS.
 3. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
 4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
 5. PANELS MUST BE PLACED ACCORDING TO SPACING TABLE 4-7.

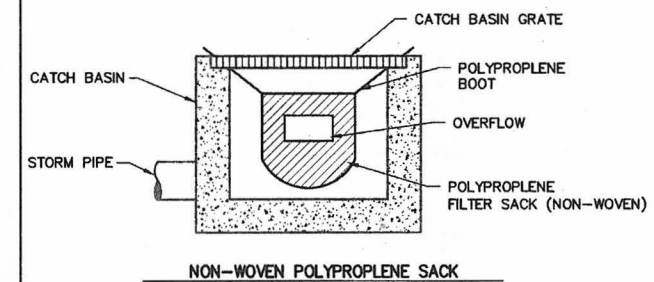


6 SEDIMENT FENCE
 N.T.S.



- NOTES:**
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
 2. BIOFILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.

4 INLET PROTECTION - TYPE 4
 N.T.S.



- NOTE:**
1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

2 INLET PROTECTION - TYPE 5
 N.T.S.



2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE	DEPARTMENT	CITY LANDSCAPE ARCHITECT	APPROVAL DATE	
	SIGNATURE	COMMUNITY DEVELOPMENT		

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: EROSION & SEDIMENT CONTROL STANDARD DETAILS

NO.	DATE	REVISION	BY



SCALE: NONE
 DATE: 4-1-2014
 DRN. RFH
 CK. SDH

C500
 JOB NO. MAEX0000-0021

Drawing File: \\Pd X00000021\0400CA0\SHEETS\C500-MAE21-ESC DTLS.DWG Date/Time: Mar 27, 2014 - 3:08pm User: sdh

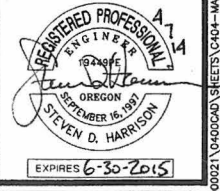


2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	
	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

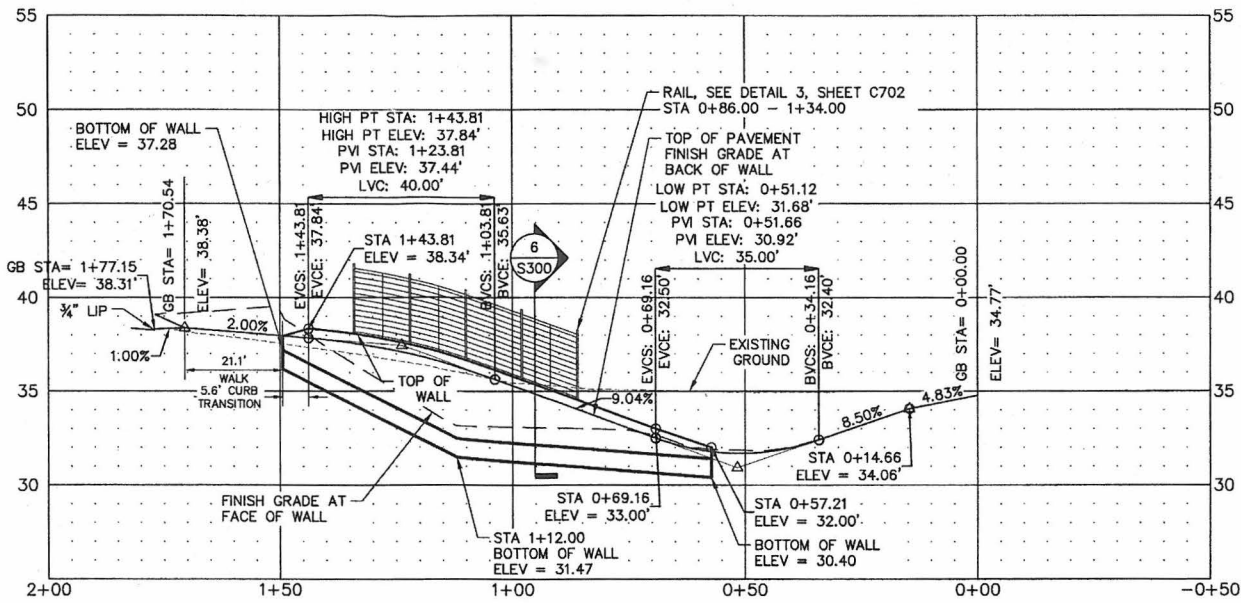
PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY	
	S.E. HARRISON STREET - KELLOGG CREEK	
SHEET TITLE	PROFILES	

NO.	DATE	REVISION	BY

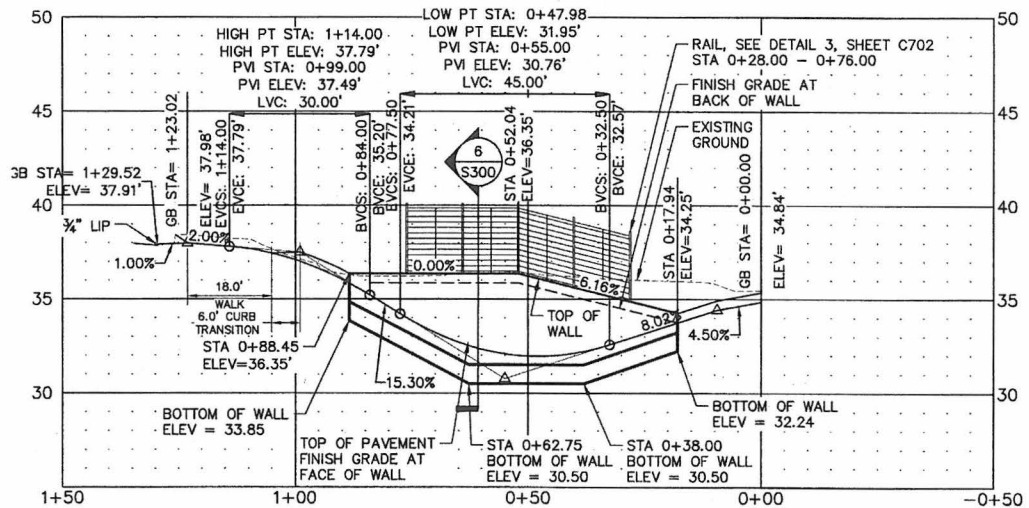


SCALE: AS SHOWN
DATE: 4-1-2014
DRN: RPH
CK: SDH

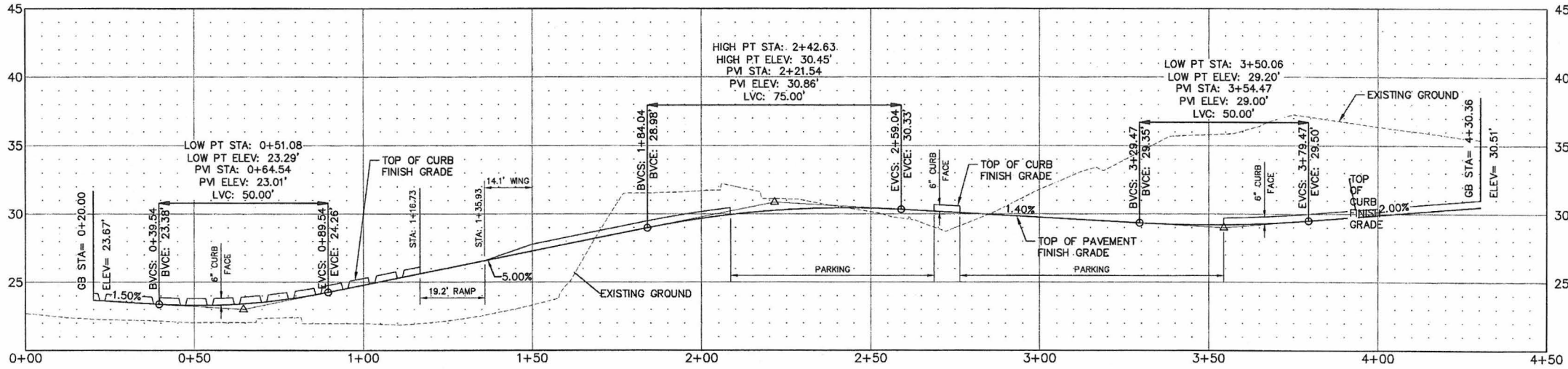
C406
JOB NO. MAEX0000-0021



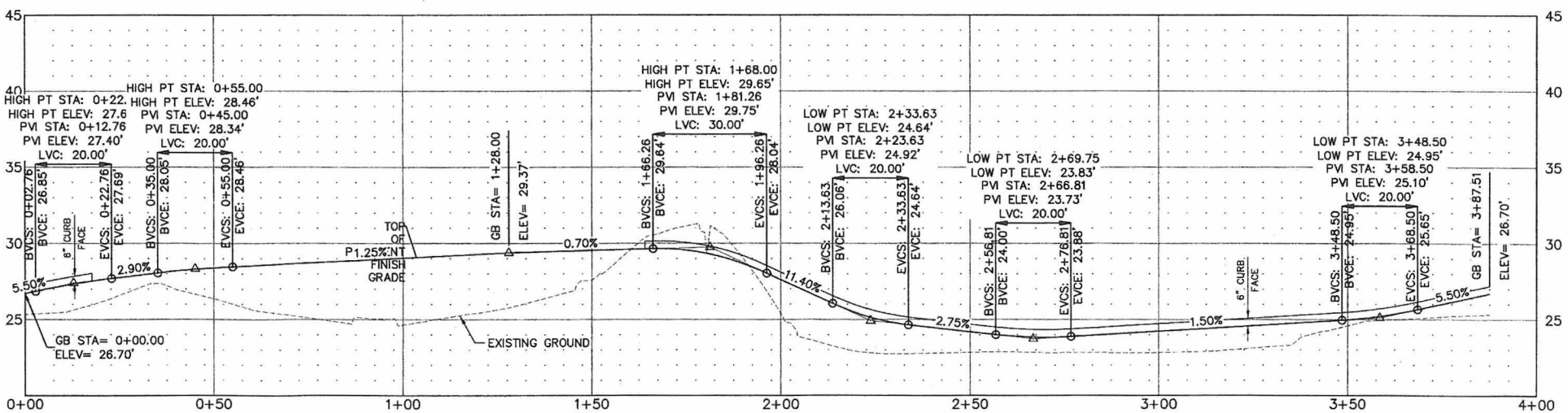
E ALIGNMENT PROFILE
WES WEST EXIT WALL
1" = 20' HORIZ. - 1" = 5' VERT.



F ALIGNMENT PROFILE
WES EAST EXIT WALL
1" = 20' HORIZ. - 1" = 5' VERT.

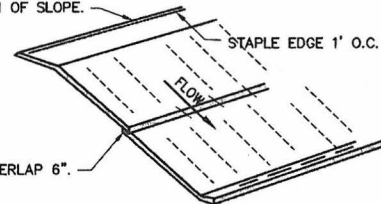


G ALIGNMENT PROFILE
FC-BOAT-OUTER
1" = 20' HORIZ. - 1" = 5' VERT.



H ALIGNMENT PROFILE
FC-BOAT-INNER
1" = 20' HORIZ. - 1" = 5' VERT.

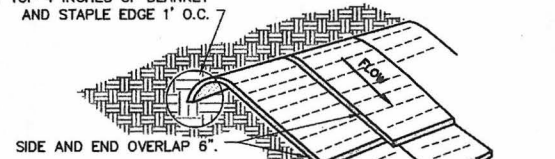
EXTEND BLANKET A MINIMUM OF 3' ABOVE CROWN OF SLOPE.



SIDE AND END OVERLAP 6".

SHALLOW SLOPES 4:1 OR LESS

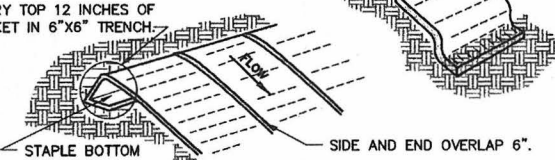
BURY TOP 4 INCHES OF BLANKET AND STAPLE EDGE 1' O.C.



SIDE AND END OVERLAP 6".

MODERATE SLOPES 3:1

BURY TOP 12 INCHES OF BLANKET IN 6"x6" TRENCH.



STAPLE BOTTOM EDGE OF BLANKET 1' O.C.

STEEP SLOPES 2:1 OR GREATER

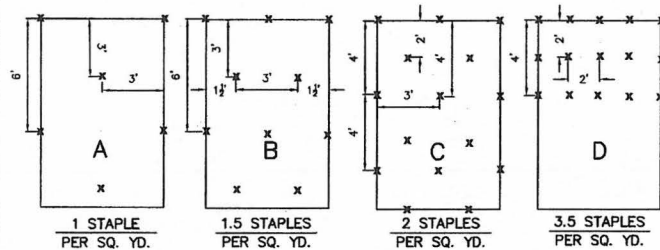
MATERIAL:
PROVIDE MATTING THAT IS 100% BIODEGRADABLE COIR TWINE HAVING NOT LESS THAN THE FOLLOWING CHARACTERISTICS.

- WEIGHT 23 OZ/SY
- THICKNESS 0.35 INCHES
- OPEN AREA 50%
- TENSILE STRENGTH DRY 1740 LBS/FT
- TENSILE STRENGTH DRY (CROSS DIRECTION) 1176 LBS/FT

- NOTES:**
1. ON SHALLOW SLOPES BLANKETS MAY BE APPLIED ACROSS THE SLOPE.
 2. ALL BLANKET STAPLE REQUIRED AS PER TABLE.

7 SLOPE MATTING - INSTALLATION
N.T.S.

STAPLE PATTERN

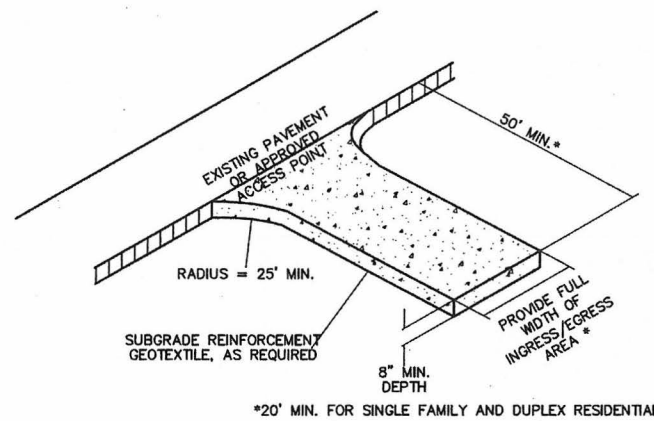


LENGTH AND SLOPE TABLE

300	B	C				
275						
250		C	C	C	D	
225						
200		B				
175						
150	A					
125		A	B			
100						
75						
50						
25						
FT	4:1	3:1	2:1	1:1	LOW FLOW CHANNEL	MED/HIGH FLOW CONTROL

*MINIMUM STAPLE PATTERN GUIDE AND RECOMMENDATION FOR SLOPE AND CHANNEL APPLICATION.

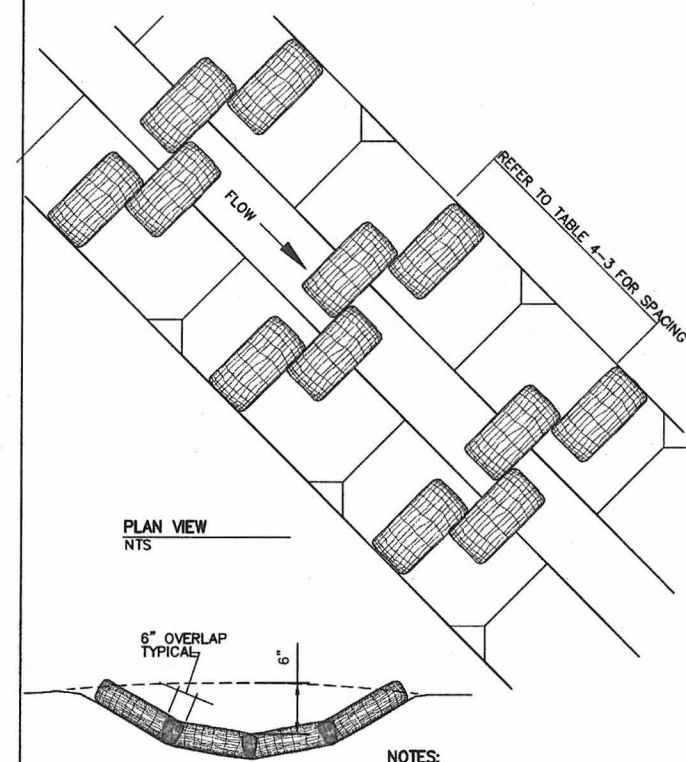
5 SLOPE MATTING - STAPLE TABLE
N.T.S.



TEMPORARY CURB RAMP

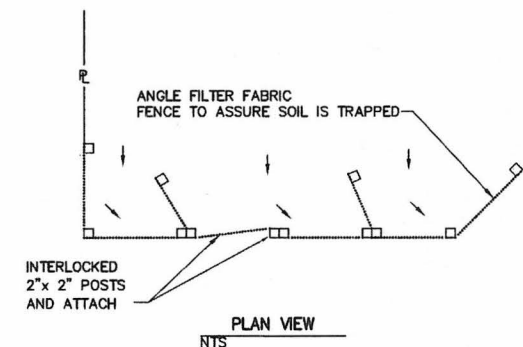
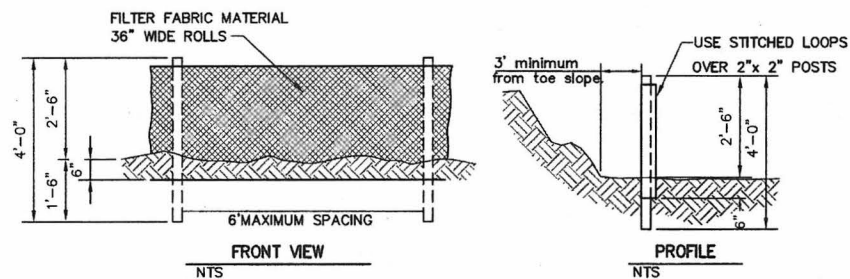
- NOTES:**
- DIMENSIONS:**
- SINGLE FAMILY:**
20' LONG BY 20' WIDE
8" DEEP OF 3/4" MINUS CLEAN ROCK.
- COMMERCIAL:**
50' LONG BY 20' WIDE
3-6" CLEAN ROCK,
GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

3 CONSTRUCTION ENTRANCE
N.T.S.



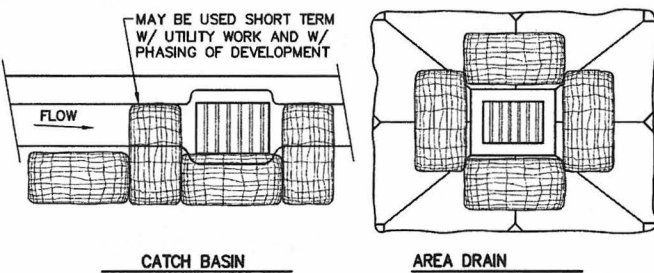
- NOTES:**
1. STAKING OF BAGS REQUIRED USING (2) 1"x2" WOOD STAKES OR APPROVED EQUAL PER BAG.
 2. SURFACE MUST BE SMOOTH BEFORE APPLICATION.

1 BIOFILTER BAG CHECK DAM
N.T.S.

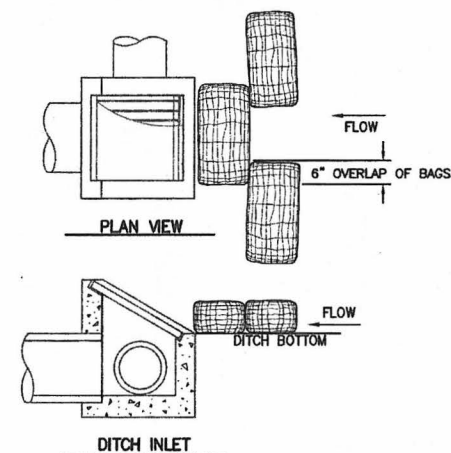


- NOTES:**
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
 2. 2"x 2" FIR, PINE OR STEEL FENCE POSTS.
 3. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
 4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
 5. PANELS MUST BE PLACED ACCORDING TO SPACING TABLE 4-7.

6 SEDIMENT FENCE
N.T.S.



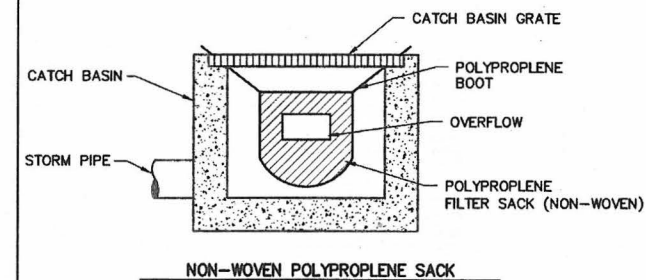
CATCH BASIN **AREA DRAIN**



DITCH INLET

- NOTES:**
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
 2. BIOFILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.

4 INLET PROTECTION - TYPE 4
N.T.S.



- NOTE:**
1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

2 INLET PROTECTION - TYPE 5
N.T.S.



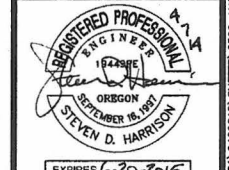
2100 SW River Parkway
Portland OR 97201
Phone: 503.223.8863
Fax: 503.223.2701

CITY OF MILWAUKIE	DEPARTMENT	CITY LANDSCAPE ARCHITECT
	SIGNATURE	COMMUNITY DEVELOPMENT
APPROVAL DATE		

**MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY**
S.E. HARRISON STREET - KELLOGG CREEK

**EROSION & SEDIMENT CONTROL
STANDARD DETAILS**

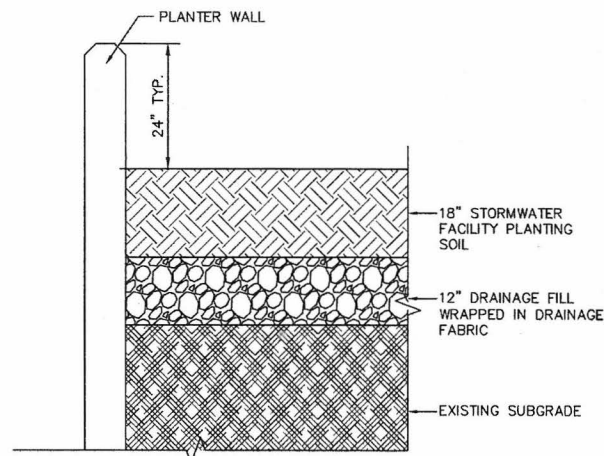
NO.	DATE	REVISION	BY



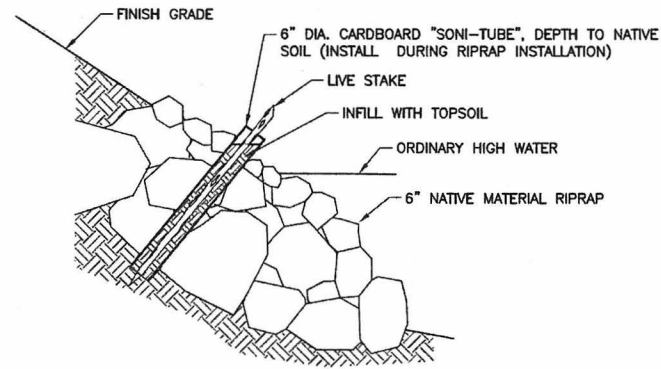
SCALE: NONE
DATE: 4-1-2014
DRN: RFH
CK: SDH

C500
JOB NO. MAEX0000-0021

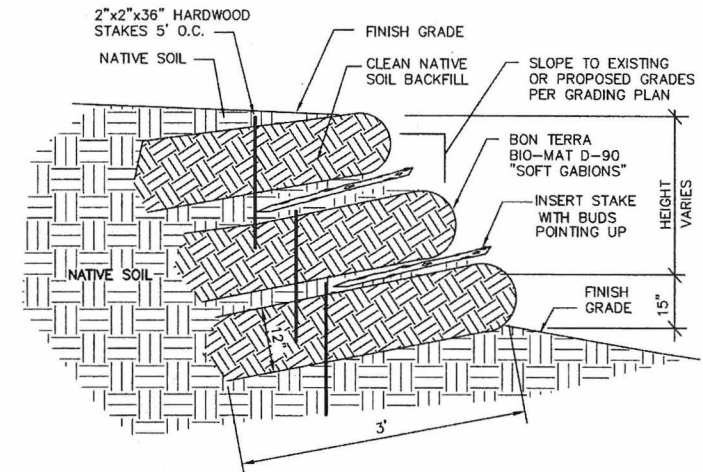
User: sdh Date/Time: Mar 27, 2014 3:08pm



5 PLANTER SECTION
N.T.S.

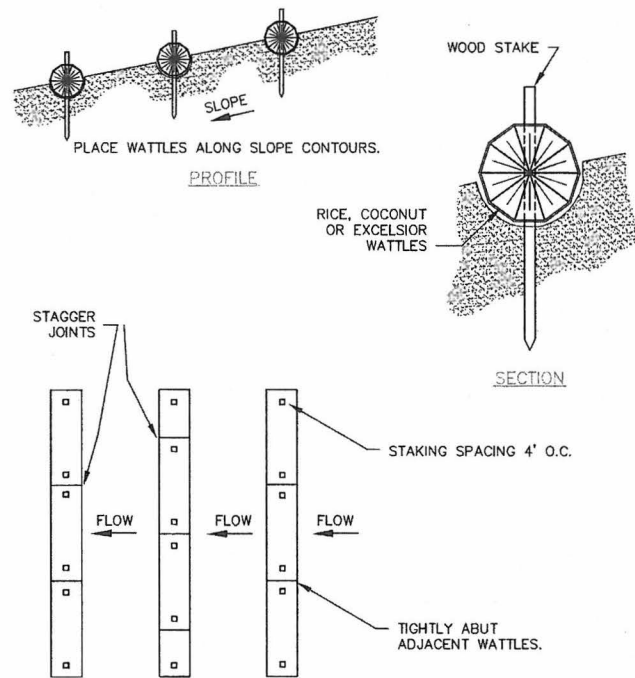


3 LIVE STAKE IN RIPRAP TITLE
N.T.S.



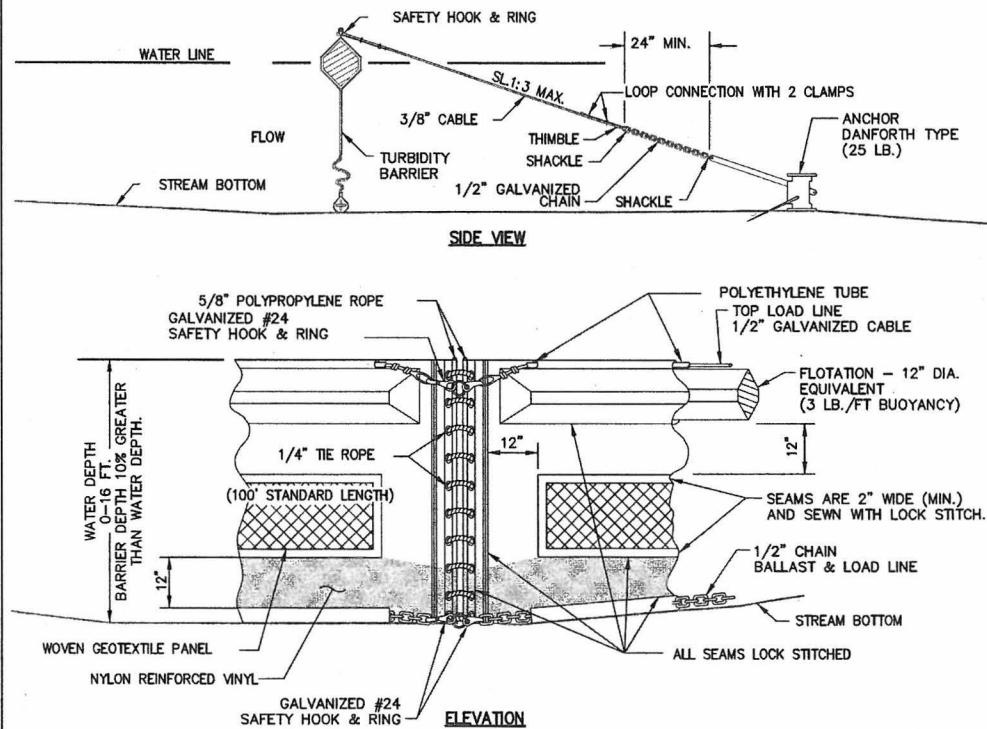
- NOTES:
1. INSTALL WILLOW STAKES AFTER EACH "SOFT GABION" LIFT
 2. INSTALL STAKES DURING THE DORMANT (SEPTEMBER-FEBRUARY). CUTTINGS TAKEN AND INSTALLED SAME DAY
 3. USE CUTTINGS 3/4" - 2" DIA.
 4. STAKE TO PROTRUDE A MINIMUM OF TWO LEAF NODES
 5. CUT STAKE TOP SQUARE FOR EASIER INSTALLATION, PROTECT TOP FROM SPLITTING.
 6. CUT STAKE END TO A POINT FOR EASIER INSTALLATION
 7. TRIM OFF BRANCHES FROM STAKE W/ CLEAN CUTS

1 SOIL LIFT SLOPE ARMOR
N.T.S.

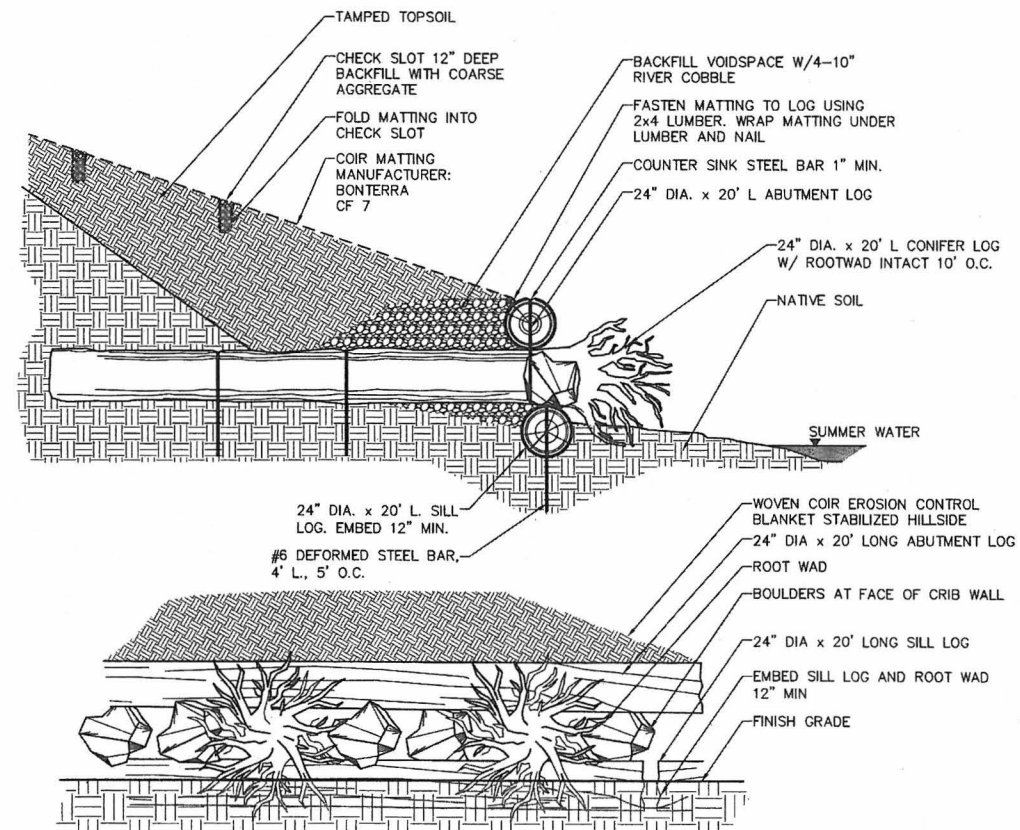


- NOTES:
1. STAKING SPECIFICATIONS:
 - a. 1"x2" WOODEN STAKES
 - b. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES, ON STEEP SLOPE OR HIGHLY EROSIIVE SOILS.
 2. SPACE WATTLES AT EVERY 5' CONTOUR INTERVAL, PER PLAN.

6 STRAW WATTLE
N.T.S.



4 FLOATING TURBIDITY BARRIER
N.T.S.



2 CRIB WALL
N.T.S.



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
		PUBLIC WORKS

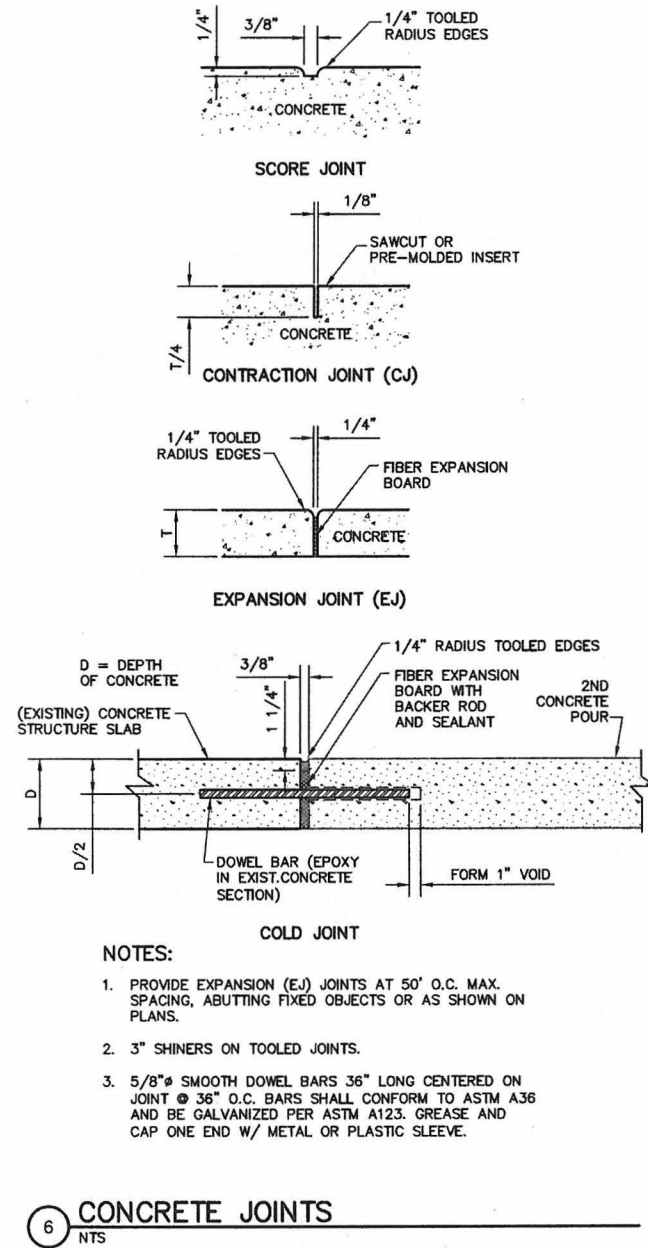
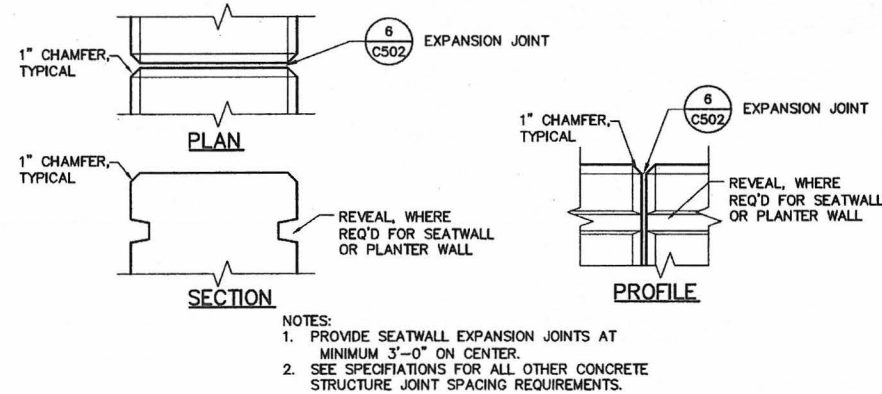
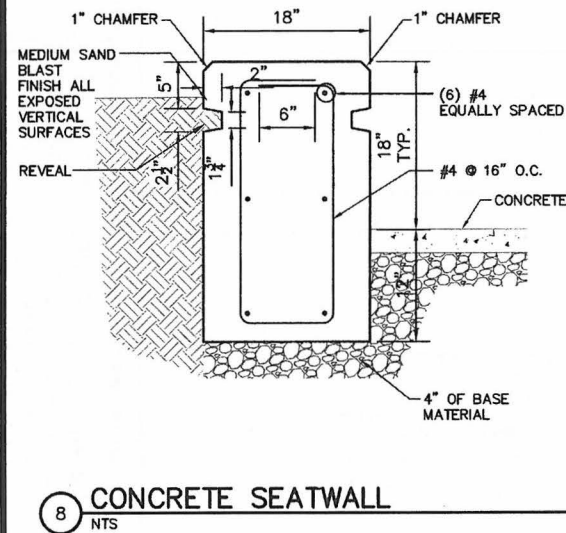
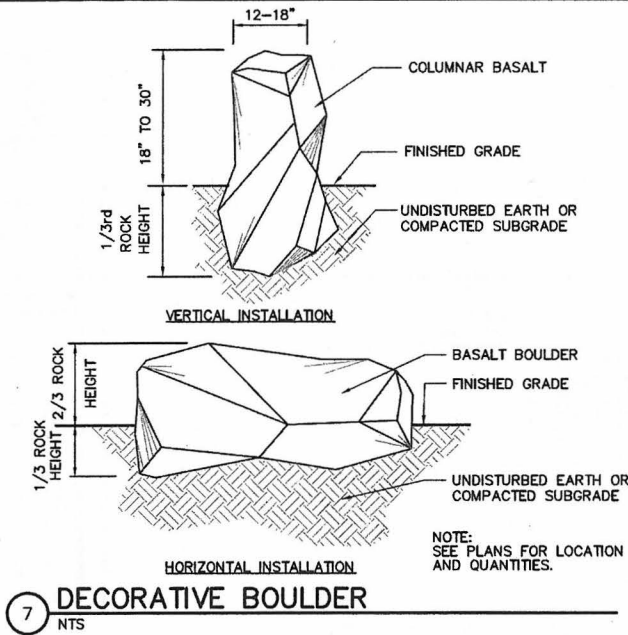
PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: EROSION & SEDIMENT CONTROL SITENWORK DETAILS
User: sdh

NO.	DATE	REVISION	BY

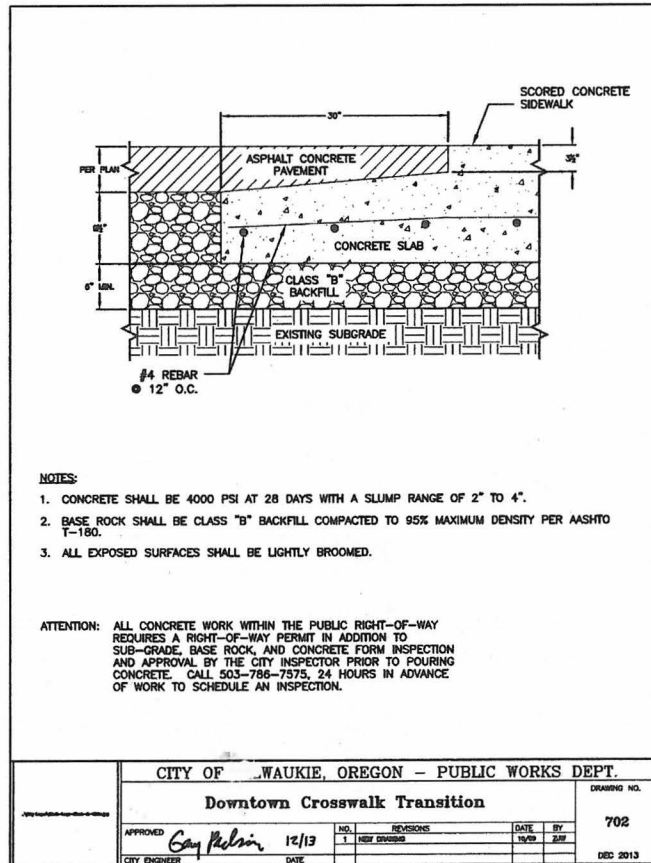
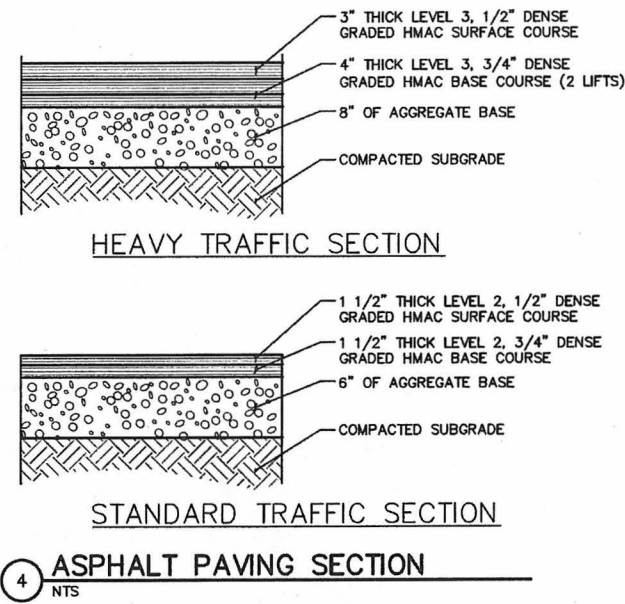


SCALE: NONE
DATE: 4-1-2014
DRN: RFH
CK: SDH

C501
JOB NO. MAEX0000-0021



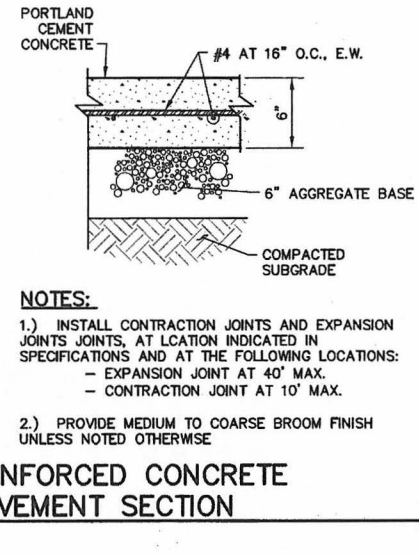
- NOTES:**
1. PROVIDE EXPANSION (EJ) JOINTS AT 50' O.C. MAX. SPACING, ABUTTING FIXED OBJECTS OR AS SHOWN ON PLANS.
 2. 3" SHINERS ON TOOLED JOINTS.
 3. 5/8" SMOOTH DOWEL BARS 36" LONG CENTERED ON JOINT @ 36" O.C. BARS SHALL CONFORM TO ASTM A36 AND BE GALVANIZED PER ASTM A123. GREASE AND CAP ONE END W/ METAL OR PLASTIC SLEEVE.



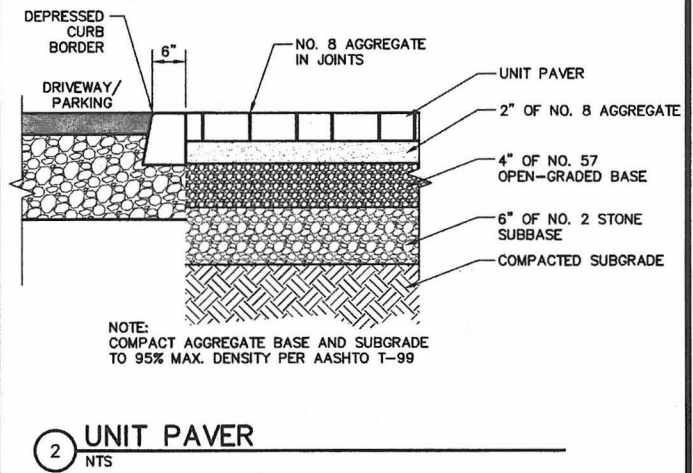
- NOTES:**
1. CONCRETE SHALL BE 4000 PSI AT 28 DAYS WITH A SLUMP RANGE OF 2" TO 4".
 2. BASE ROCK SHALL BE CLASS "B" BACKFILL COMPACTED TO 95% MAXIMUM DENSITY PER AASHTO T-180.
 3. ALL EXPOSED SURFACES SHALL BE LIGHTLY BROOMED.

ATTENTION: ALL CONCRETE WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A RIGHT-OF-WAY PERMIT IN ADDITION TO SUB-GRADE, BASE ROCK, AND CONCRETE FORM INSPECTION AND APPROVAL BY THE CITY INSPECTOR PRIOR TO POURING CONCRETE. CALL 503-786-7575, 24 HOURS IN ADVANCE OF WORK TO SCHEDULE AN INSPECTION.

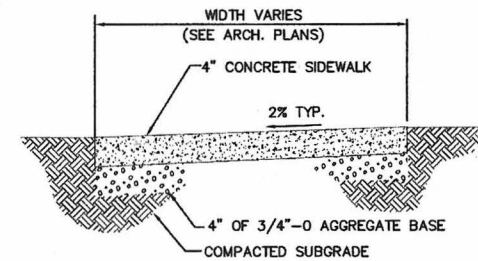
CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.		DRAWING NO.
Downtown Crosswalk Transition		702
APPROVED	DATE	BY
<i>Gay Nelson</i>	12/13	NEW DESIGN
CITY ENGINEER	DATE	BY
		DEC 2013



- NOTES:**
- 1.) INSTALL CONTRACTION JOINTS AND EXPANSION JOINTS AT LOCATION INDICATED IN SPECIFICATIONS AND AT THE FOLLOWING LOCATIONS:
 - EXPANSION JOINT AT 40' MAX.
 - CONTRACTION JOINT AT 10' MAX.
 - 2.) PROVIDE MEDIUM TO COARSE BROOM FINISH UNLESS NOTED OTHERWISE



NOTE: COMPACT AGGREGATE BASE AND SUBGRADE TO 95% MAX. DENSITY PER AASHTO T-99



- NOTES:**
1. CONCRETE SHALL BE 4000 PSI, SLUMP RANGE 3" TO 5".
 2. PROVIDE SCORE JOINTS AT 5'±, O.C., UNLESS OTHERWISE NOTED PLANS.
 3. PROVIDE LIGHT BROOM FINISH TRANSVERSE TO THE LINE OF TRAFFIC.

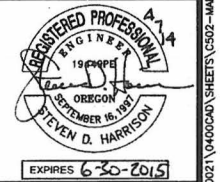


2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE	DEPARTMENT	CITY LANDSCAPE ARCHITECT	SIGNATURE	APPROVAL DATE
	COMMUNITY DEVELOPMENT	PUBLIC WORKS		

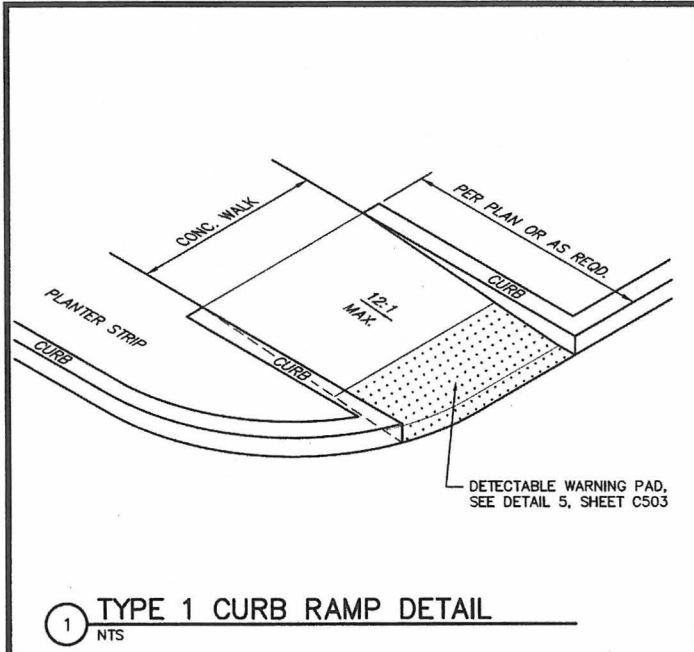
PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS PAVEMENT DETAILS

NO.	DATE	REVISION	BY

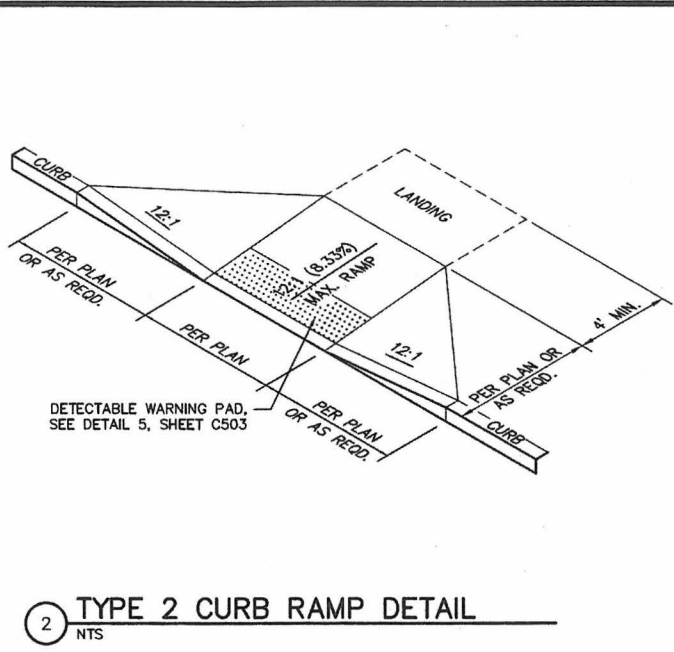


SCALE: AS SHOWN
DATE: 4-1-2014
DRN. BAR
CK. SDH

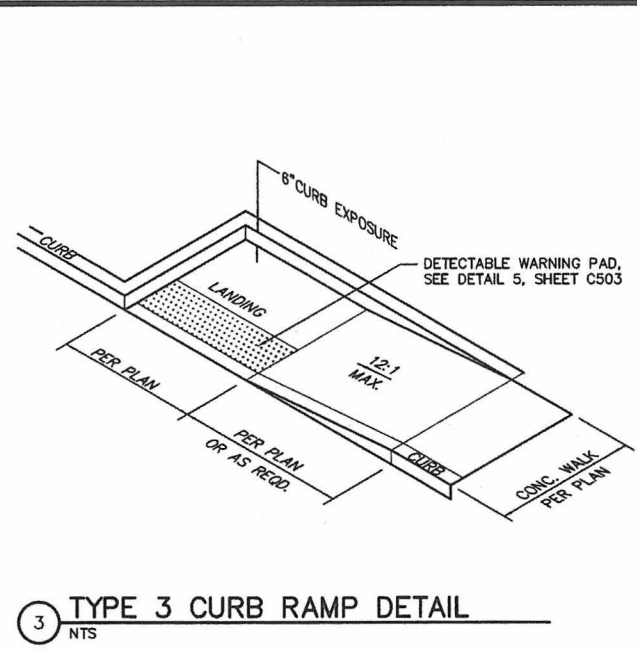
C502
JOB NO. MAEX0000-0021



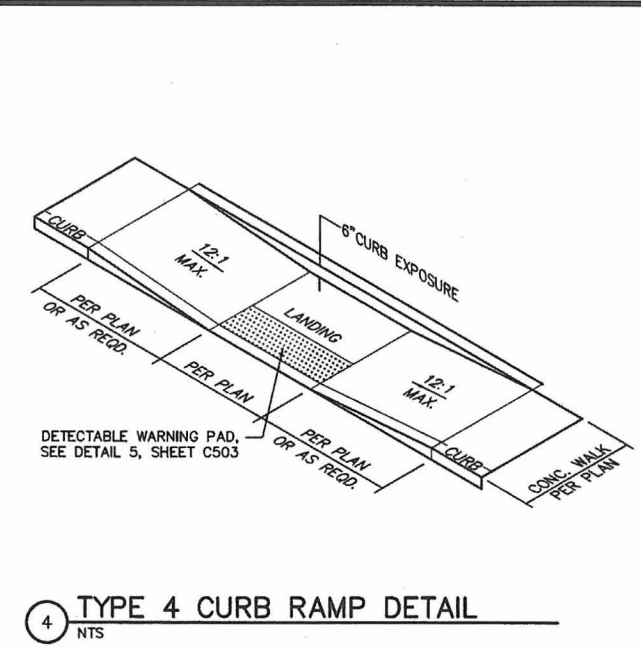
1 TYPE 1 CURB RAMP DETAIL
NTS



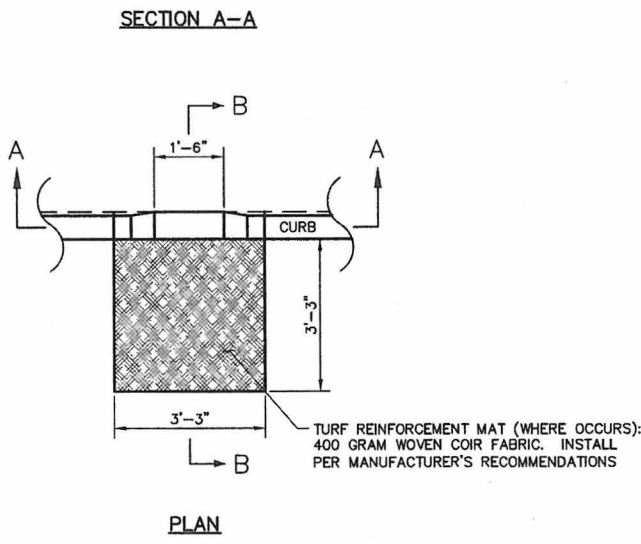
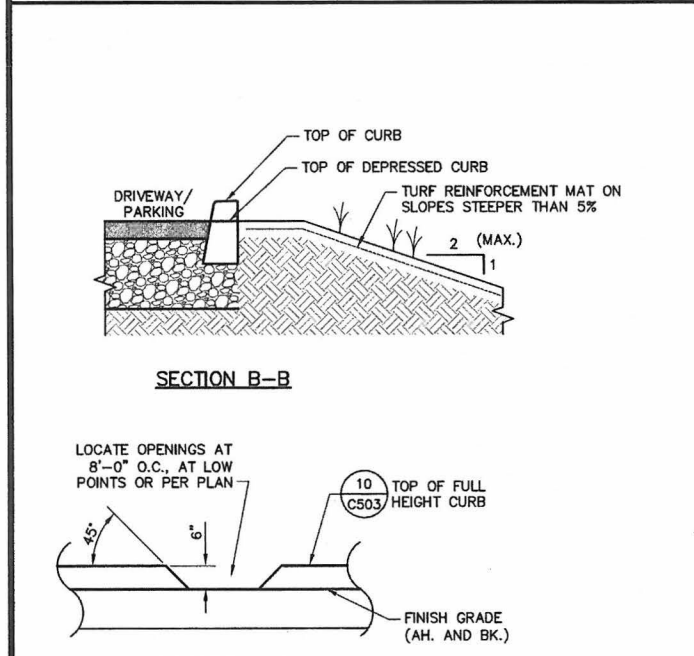
2 TYPE 2 CURB RAMP DETAIL
NTS



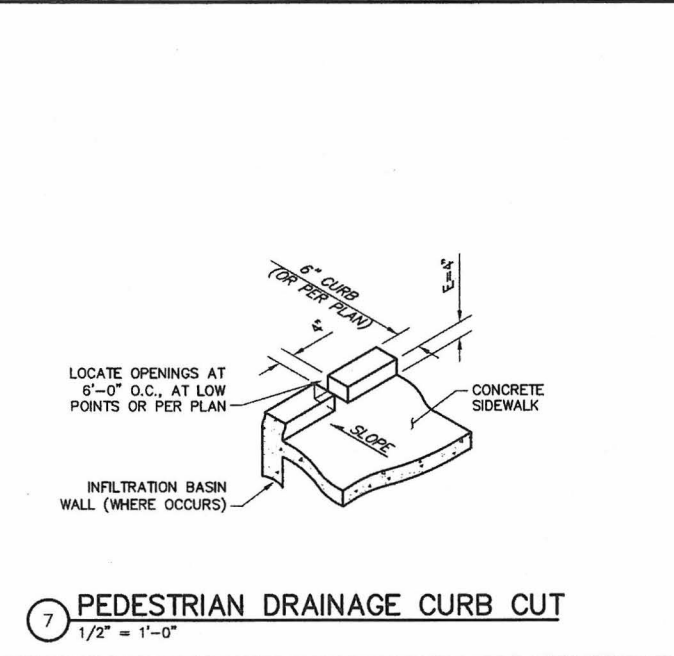
3 TYPE 3 CURB RAMP DETAIL
NTS



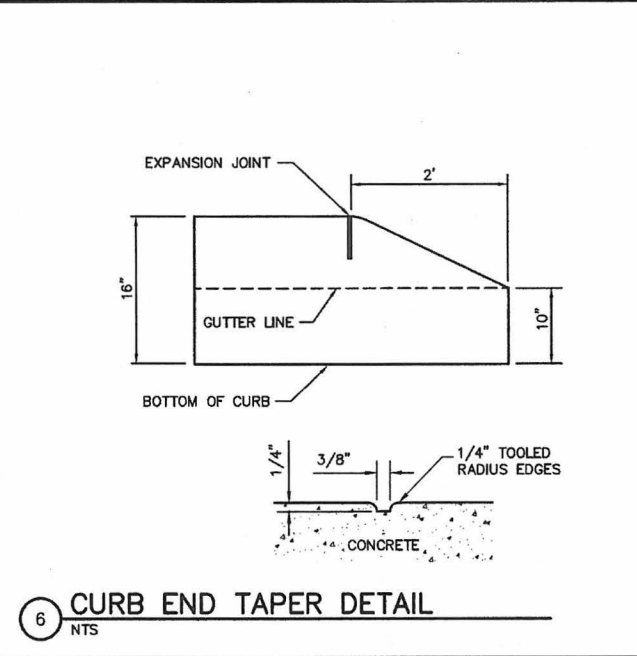
4 TYPE 4 CURB RAMP DETAIL
NTS



8 ROADWAY DRAINAGE CURB CUT
1/2" = 1'-0"



7 PEDESTRIAN DRAINAGE CURB CUT
1/2" = 1'-0"

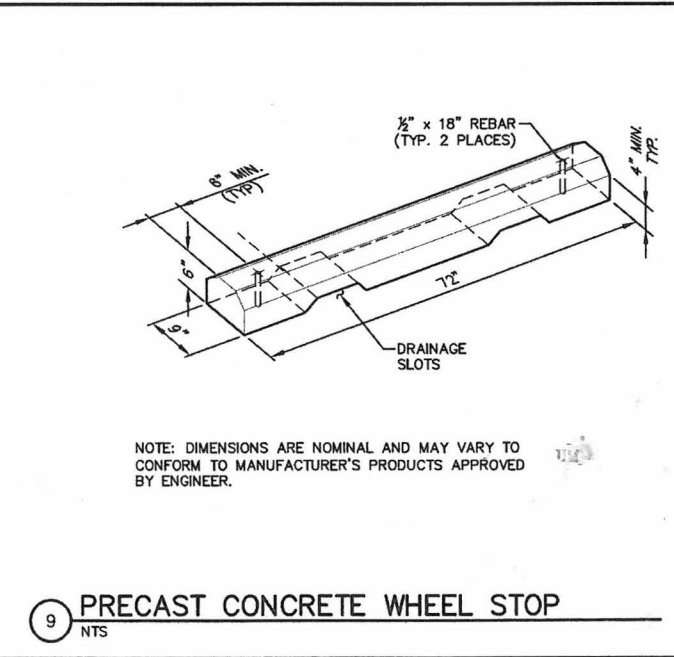


6 CURB END TAPER DETAIL
NTS

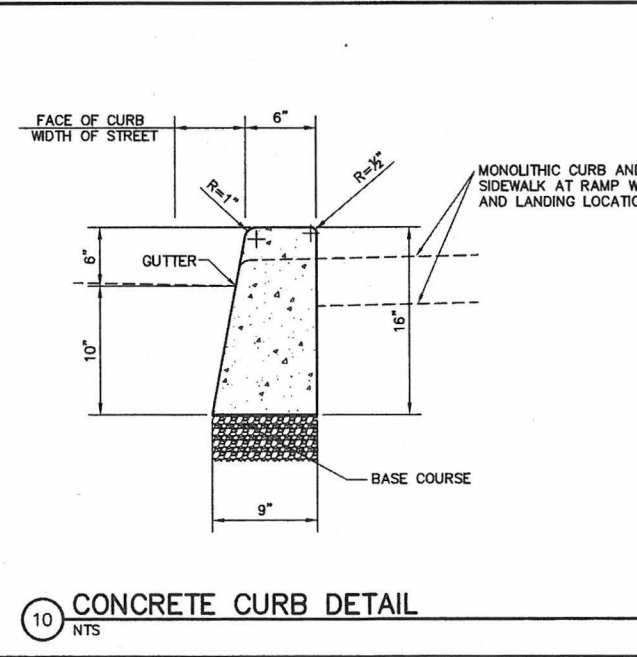
CURB RAMP NOTES:

- DO NOT SLOPE LANDINGS MORE THAN 2% IN ANY DIRECTION.
- PLACE TRUNCATED DOME DETECTABLE TEXTURE IN THE LOWER 24" OF THROAT OF RAMP ONLY (ADJACENT TO TRAFFIC).
- TOOLED JOINTS ARE REQUIRED AT ALL SIDEWALK RAMP SLOPE BREAK LINES.
- CONSTRUCT SIDEWALK SLAB PER DETAIL 3, SHEET C502.
- SIDEWALK FLARE IS NOT NECESSARY WHEN RAMP IS PROTECTED FROM PEDESTRIAN CROSS-TRAVEL.
- DETECTABLE WARNING PAD SHALL BE 24" LONG IN THE DIRECTION OF TRAVEL AND INSTALLED ALONG THE FULL WIDTH OF THE BOTTOM OF THE SIDEWALK RAMP. MASCO CAST-IN-TACT (BLACK) OR APPROVED EQUAL.

5 TYPICAL CURB RAMP NOTES
NTS



9 PRECAST CONCRETE WHEEL STOP
NTS



10 CONCRETE CURB DETAIL
NTS

CONCRETE CURB NOTES:

- CONCRETE TO HAVE COMPRESSIVE STRENGTH OF 4000 P.S.I. AFTER 28 DAYS. EXPANSION JOINTS:
 - A. TO BE PROVIDED:
 - AT EACH POINT OF TANGENCY OF THE CURB.
 - AT EACH COLD JOINT.
 - AT EACH SIDE OF INLET STRUCTURES.
 - AT EACH END OF DRIVEWAYS.
 - B. MATERIAL TO BE PRE-MOLDED, ASPHALT IMPREGNATED, NON-EXTRUDING, WITH A THICKNESS OF 1/2 INCH.
- CONTRACTION JOINTS.
 - A. SPACING TO BE NOT MORE THAN 15 FEET.
 - B. THE DEPTH OF THE JOINT SHALL BE AT LEAST 1-1/2 INCHES. WEEPHOLE TO BE CENTERED WITH CONTRACTION JOINTS.
- BASE ROCK 2'-0" OR 3/4'-0", 95% (AASHTO T-180) COMPACTION. BASE ROCK SHALL BE TO SUBGRADE OF STREET STRUCTURE OR 4" IN DEPTH, WHICHEVER IS GREATER. SUBGRADE ROCK TO EXTEND 12" BEHIND CURB.



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
	APPROVAL DATE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	PUBLIC WORKS

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS PAVEMENT DETAILS

NO.	DATE	REVISION	BY



SCALE:	AS SHOWN
DATE:	4-1-2014
DRN:	BAR
CK:	SDH

C503
JOB NO. MAEX0000-0021

GRATE	SIZE	# OF BARS	TYPE	REMARKS
TYPE 2	1'-1/2" x 2'-8"	8	G2	GRATES

NOTES:

- CROSS BARS SHALL BE FLUSH WITH THE GRATE SURFACE.
- OUTER BEARING BARS AND EVERY THIRD INNER BEARING BAR MUST BE WELDED TO THE END BARS (1/4" TYP.).
- ALL CROSS BARS MUST BE EITHER FILLET WELDED, RESISTANCE WELDED OR ELECTROFORCED TO THE BEARING BARS (1/4" TYP.).

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.
G-2 Catchbasin Grate
 DRAWING NO. 607
 APPROVED: *Gay Nelson* 12/13
 MILWAUKIE CITY ENGINEER DATE

7 G-2 CATCH BASIN GRATE
NTS

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.
Area Drain
 DRAWING NO. 608
 APPROVED: *Gay Nelson* 12/13
 MILWAUKIE CITY ENGINEER DATE

5 AREA DRAIN
NTS

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.
Curb Inlet Catchbasin - Sidewalk
 DRAWING NO. 604B
 APPROVED: *Gay Nelson* 12/13
 MILWAUKIE CITY ENGINEER DATE

3 CURB INLET - CATCH BASIN
NTS

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.
G-2 Catchbasin
 DRAWING NO. 600
 APPROVED: *Gay Nelson* 12/13
 MILWAUKIE CITY ENGINEER DATE

1 G-2 CATCH BASIN
NTS

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.
Storm Manhole Frame and Lid
 DRAWING NO. 617
 APPROVED: *Gay Nelson* 12/13
 MILWAUKIE CITY ENGINEER DATE

8 FRAME AND LID
NTS

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.
G-2 Catchbasin Frame
 DRAWING NO. 606
 APPROVED: *Gay Nelson* 12/13
 MILWAUKIE CITY ENGINEER DATE

6 G-2 CATCH BASIN FRAME
NTS

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.
Catchbasin - Ditch Inlet
 DRAWING NO. 605
 APPROVED: *Gay Nelson* 12/13
 MILWAUKIE CITY ENGINEER DATE

4 DITCH INLET
NTS

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.
Curb Inlet Catchbasin - Sidewalk
 DRAWING NO. 604A
 APPROVED: *Gay Nelson* 12/13
 MILWAUKIE CITY ENGINEER DATE

2 CURB INLET
NTS



2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	APPROVAL DATE
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

**MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY**
 S.E. HARRISON STREET - KELLOGG CREEK

**CIVIL SITE DETAILS
 UTILITY DETAILS**

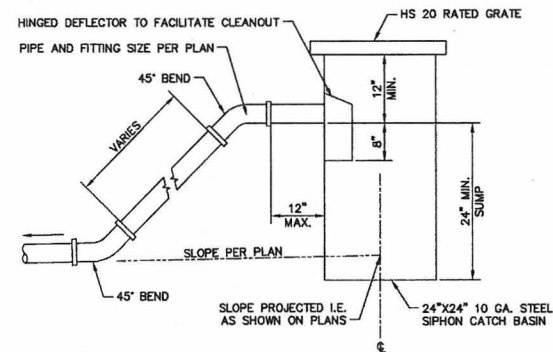
SHEET TITLE

NO.	DATE	REVISION

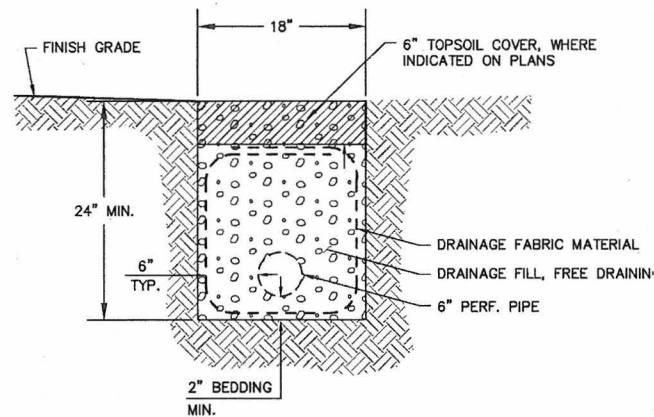


SCALE: AS SHOWN
 DATE: 4-1-2014
 DRN. BAR
 CK. SDH

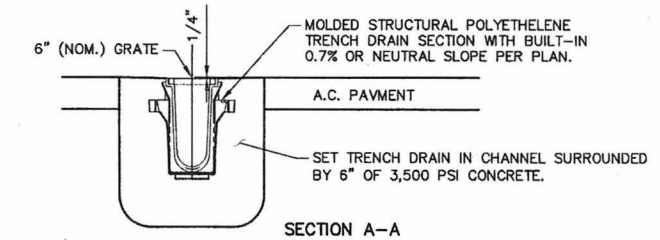
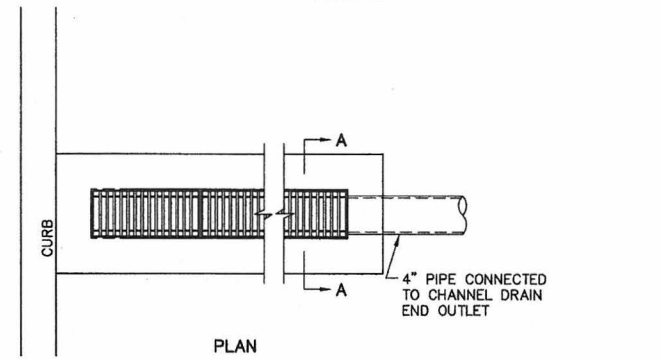
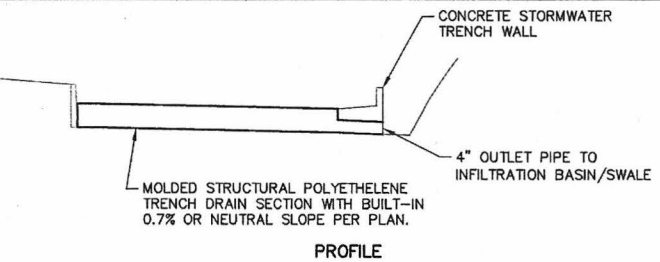
C504
 JOB NO. MAEX0000-0021



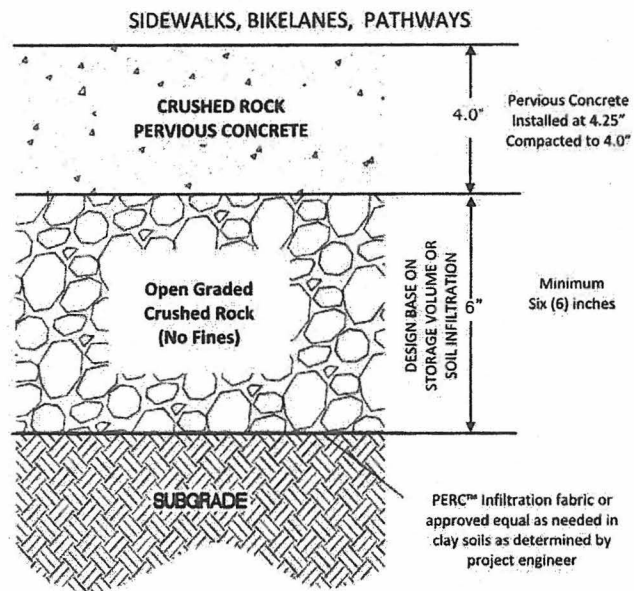
5 CATCH BASIN
NTS



3 UNDER DRAIN
NTS

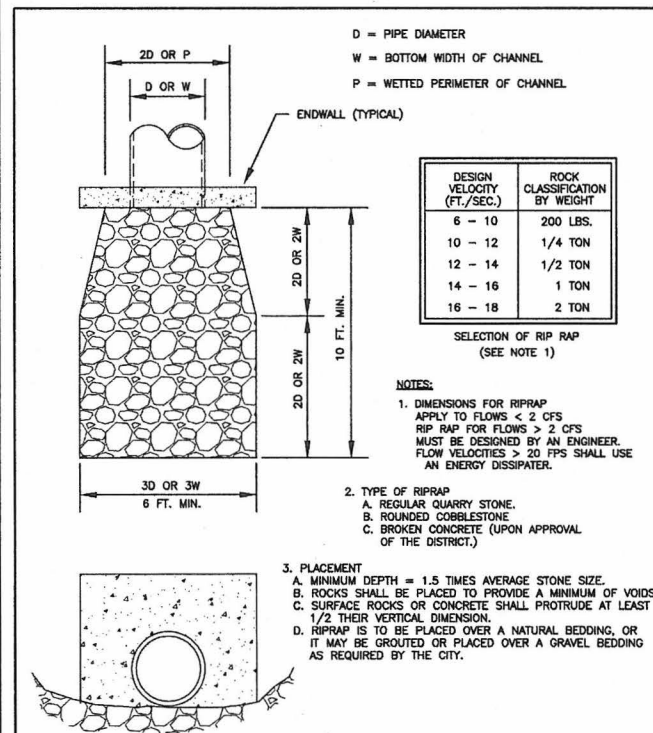


1 CHANNEL DRAIN
NTS



1. SCARIFY ORGANIC MATERIAL (3" MIN.), THEN ROLL TO IDENTIFY AND ELIMINATE ANY WET, SOFT, OR PUDDLING AREAS.
2. INFILTRATION BED (AGGREGATE LAYER) SHALL BE DESIGNED BASED ON STORMWATER REQUIREMENTS, SUBGRADE INFILTRATION CHARACTERISTICS AND SUBGRADE BEARING CAPACITY.
3. AN INFILTRATION FABRIC SHALL SEPARATE THE AGGREGATE AND THE SUBGRADE IN CLAY SOIL. FABRIC (PERC™ OR EQUIVALENT) SHALL BE INERT TO BIOLOGICAL DEGRADATION AND CHEMICAL, ALKALI/ACID RESISTANT.
4. DO NOT COMPACT SUBBASE. MAINTAIN MAXIMUM PRACTICAL INFILTRATION.

6 POROUS CONCRETE
NTS

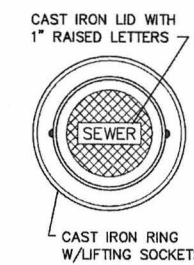


CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

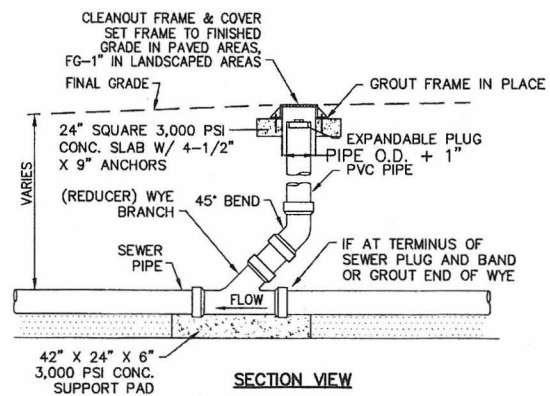
623

NO.	REVISIONS	DATE	BY
1	ADJUSTED DRAWING LETTER TEXT SIZE	12/13	ML
2	COVERED MISSING NUMBER	12/13	ML

4 OUTFALL RIPRAP
NTS



PIPE DIA.	FRAME & COVER INLAND FOUNDRY OR EQUAL
6" MIN.	No. 202
8"	No. 203
10"	No. 206
12"	No. 209
15" OR LARGER	



2 SEWER CLEANOUT DETAIL
NTS

DAVID EVANS ARCHITECTURE SURVEY, LANDSCAPE ARCHITECTURE ENGINEERING, PLANNING

2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE

DEPARTMENT	SIGNATURE	APPROVAL DATE
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

CIVIL SITE DETAILS
UTILITY DETAILS

PROJECT SHEET TITLE

NO.	DATE	REVISION	BY

REGISTERED PROFESSIONAL ENGINEER

12240916

SEPTEMBER 16, 1997

DAVID O. HARRISON

EXPIRES 6-30-2015

SCALE: AS SHOWN

DATE: 4-1-2014

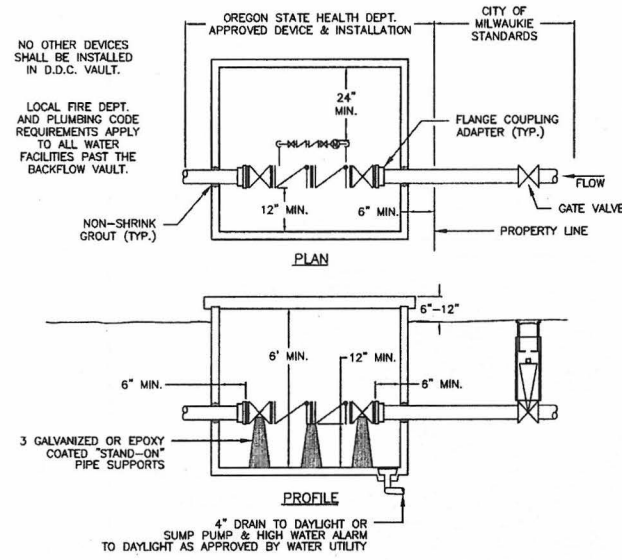
DRN. BAR

CK. SDH

C505

JOB NO. MAEX0000-0021

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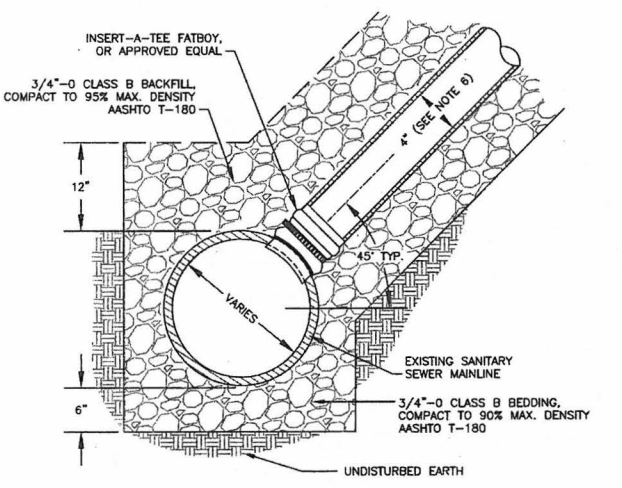
D.D.C. SIZE	UTILITY VAULT for DOUBLE DETECTOR CHECK DEVICE VAULT	
	LID	LID
3"	577-LA	LID 57-T-2-332P
4"	577-LA	LID 57-T-2-332P
6"	676-LA	LID 676-T-2-332P
8"	687-2-LA	LID 687-T-2-332P
10"	5106-1-LA	LID 5106-3-T-3-332P

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Double Detector Check Vault

APPROVED: *Gay Nelson* 12/13
 DATE: 12/13
 NO. 411A
 REVISIONS: _____ DATE BY _____
 MILWAUKIE CITY ENGINEER DATE DEC 2013

5 DOUBLE DETECTOR CHECK VAULT
NTS



- NOTES:
- THE SEWER TAP SHALL NOT BE MADE EXCEPT IN THE PRESENCE OF A CITY INSPECTOR NOR SHALL ANY CONNECTION BE MADE WITHOUT CITY APPROVAL.
 - AN INSERT-A-TEE FATBOY OR APPROVED EQUAL SHALL BE USED. HDPE ELECTROFUSION TEE OR WYE MAY BE REQUIRED ON HDPE SANITARY SEWER MAINLINES.
 - HOLE IN MAIN TO BE MACHINE DRILLED AND CORED.
 - SEWER TAP TO BE ABOVE SPRINGLINE.
 - 4" MAXIMUM TAP FOR 8" MAIN WITH APPROVED COUPLERS (CUT-IN TEE TO BE USED FOR 6" HOUSE BRANCH ON 8" MAIN)
 - 4" HOUSE BRANCH MAY BE USED FOR SINGLE FAMILY LOTS ONLY.

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Standard Sewer Tap

APPROVED: *Gay Nelson* 12/13
 DATE: 12/13
 NO. 308
 REVISIONS: _____ DATE BY _____
 MILWAUKIE CITY ENGINEER DATE DEC 2013

6 STD SEWER TAP
NTS

CITY OF MILWAUKIE
REQUIREMENTS FOR BACKFLOW PREVENTION ASSEMBLY
INSTALLATIONS ON 1 1/2" AND LARGER DOMESTIC SERVICES

AN APPROVED BACKFLOW PREVENTION ASSEMBLY IS REQUIRED ON ALL 1 1/2" AND LARGER DOMESTIC METER SIZE SERVICES. ALL IRRIGATION AND MOST FIRELINE SYSTEMS. AN ASSEMBLY WILL BE APPROVED BY THE CITY OF MILWAUKIE ONLY IF THE STATE OF OREGON HEALTH DIVISION HAS APPROVED ITS USE AS A BACKFLOW ASSEMBLY. THE ASSEMBLY SHALL BE INSTALLED AT THE PROPERTY LINE. THE PROPOSED LOCATION MUST BE APPROVED BY THE WATER DIVISION CROSS-CONNECTION SPECIALIST OR CITY ENGINEER. A WATER SERVICE SHALL NOT BE TURNED ON UNTIL ALL REQUIRED BACKFLOW PREVENTION ASSEMBLIES ARE INSTALLED, INSPECTED, TESTED AND REGISTERED WITH THE CITY OF MILWAUKIE CROSS CONNECTION SPECIALIST. COSTS OF ALL INSTALLATIONS, INCLUDING ALL COSTS OF INITIAL INSPECTION AND TESTING FEES, SHALL BE THE RESPONSIBILITY OF THE CUSTOMER. THE CUSTOMER WILL BE RESPONSIBLE FOR ALL MAINTENANCE AND TESTING OF THE ASSEMBLY AND VAULT WHEN USED.

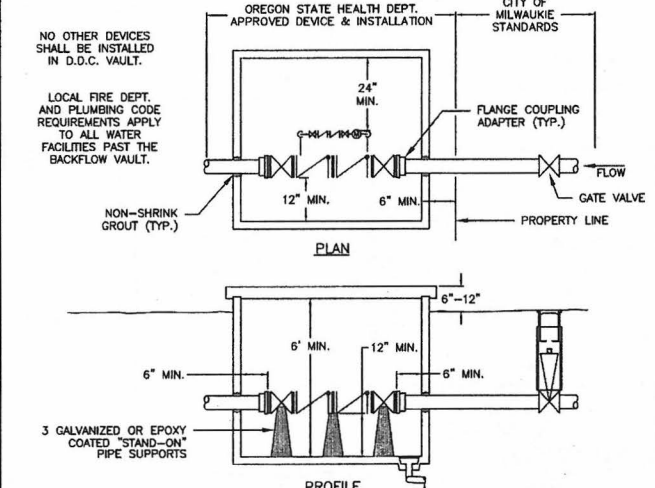
- TO ENSURE PROPER OPERATION AND ACCESSIBILITY OF ALL BACKFLOW PREVENTION ASSEMBLIES, THE FOLLOWING REQUIREMENTS SHALL APPLY TO INSTALLATION OF THESE ASSEMBLIES UNLESS SPECIFICALLY APPROVED BY THE WATER DIVISION CROSS CONNECTION SPECIALIST OR CITY ENGINEER.
- NO PART OF THE BACKFLOW PREVENTION ASSEMBLY SHALL BE SUBMERGED IN WATER OR INSTALLED IN A LOCATION SUBJECT TO FLOODING. IF INSTALLED IN A VAULT OR CHAMBER, ADEQUATE DRAINAGE SHALL BE PROVIDED BY EITHER DRAINAGE TO DAYLIGHT OR BY SUMP PUMP WITH HIGH WATER ALARM SYSTEM. TEST COCKS SHALL BE PLUGGED. THE PLUGS SHALL NOT BE OF DISSIMILAR METALS.
 - THE ASSEMBLY MUST BE PROTECTED FROM FREEZING AND OTHER SEVERE WEATHER CONDITIONS.
 - ONLY ASSEMBLIES APPROVED FOR VERTICAL INSTALLATION MAY BE INSTALLED VERTICALLY.
 - THE ASSEMBLY SHALL BE READILY ACCESSIBLE WITH ADEQUATE ROOM FOR MAINTENANCE AND TESTING. DEVICES 2 INCHES AND SMALLER SHALL HAVE AT LEAST A 12-INCH CLEARANCE BELOW AND ON BOTH SIDES OF THE ASSEMBLY; AND IF LOCATED IN A VAULT, THE TOP OF THE ASSEMBLY SHALL BE BETWEEN 12 AND 24 INCHES BELOW GRADE.
 - ALL ASSEMBLIES LARGER THAN 2 INCHES SHALL HAVE A 12-INCH CLEARANCE ON THE BACKSIDE, A 24-INCH CLEARANCE ON THE TEST-COCK SIDE, AND 12 INCHES BELOW THE DEVICE ASSEMBLIES. ADEQUATE CLEARANCE (3 INCHES MINIMUM) MUST BE MAINTAINED ABOVE O.S.&Y. GATE VALVE STEM. HEADROOM OF 6'0" IS REQUIRED IN VAULTS. ACCESS TO THE ASSEMBLY AND TO ANY VAULT OF CHAMBER SHALL REMAIN CLEAR AT ALL TIMES. AN OSHA APPROVED CHAMBER LADDER THAT EXTENDS 3 FT. ABOVE SURFACE OF VAULT SHALL BE INSTALLED.
 - NO INDICATING VALVES ARE ALLOWED ON DOUBLE CHECK ASSEMBLIES.
 - ONLY APPROVED DOUBLE CHECK DETECTOR CHECK VALVE ASSEMBLIES ARE TO BE USED FOR SYSTEM CONTAINMENT ON FIRE LINE SERVICES IN THE CITY OF MILWAUKIE. THE METER ON BYPASS ASSEMBLIES SHALL READ IN CUBIC FEET.
 - IF A FIRE LINE FLOW, OR TAMPER SWITCH IS INSTALLED, IT MUST BE CONNECTED TO A MONITORED FIRE DETECTION SYSTEM APPROVED BY THE FIRE MARSHAL. NO INSTALLATION WILL MODIFY THE BACKFLOW ASSEMBLY OR INTERFERE WITH ITS OPERATION OR MAINTENANCE.
 - ALL BACKFLOW ASSEMBLY SHALL BE INSTALLED AT THE SERVICE CONNECTION TO THE PREMISES PER OREGON, ADMINISTRATIVE RULES 333-81-070, CROSS CONNECTION CONTROL REQUIREMENTS, UNLESS SPECIFICALLY APPROVED BY THE WATER DIVISION CROSS CONNECTION SPECIALIST OR CITY ENGINEER.
 - ALL PIPE BETWEEN MAIN AND DEVICE SHALL BE RESTRAINED. USE MEGA-LUG RETAINER GLANDS ON MJ FITTINGS AND FIELD-LOK GASKETS ON BELL JOINTS. UNI-FLANGE ADAPTERS MAY BE USED IN VAULTS.

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Double Detector Check Vault Notes

APPROVED: *Gay Nelson* 12/13
 DATE: 12/13
 NO. 411B
 REVISIONS: _____ DATE BY _____
 MILWAUKIE CITY ENGINEER DATE DEC 2013

3 DDCV NOTES
NTS



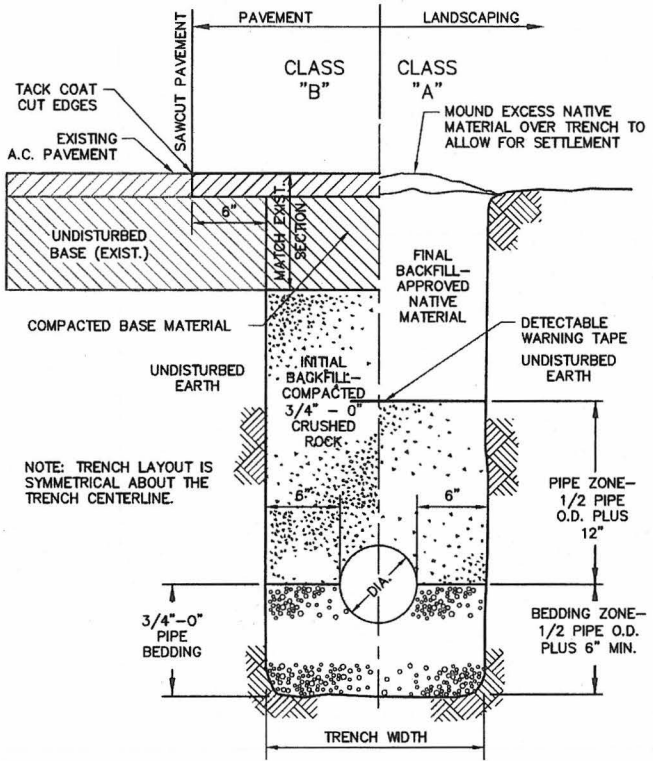
D.D.C. SIZE	UTILITY VAULT for DOUBLE DETECTOR CHECK DEVICE VAULT	
	LID	LID
3"	577-LA	LID 57-T-2-332P
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10"	5106-1-LA	LID 5106-3-T-3-332P

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Double Detector Check Vault

APPROVED: *Gay Nelson* 12/13
 DATE: 12/13
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 REVISIONS: _____ DATE BY _____
 MILWAUKIE CITY ENGINEER DATE DEC 2013

4 DOUBLE DETECTOR CHECK VAULT
NTS

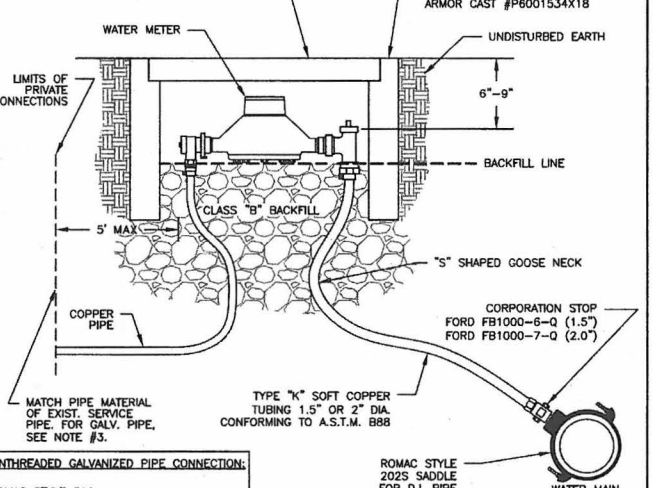


CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Standard 1.5 - 2 Inch Water Service

APPROVED: *Gay Nelson* 12/13
 DATE: 12/13
 NO. 402
 REVISIONS: _____ DATE BY _____
 MILWAUKIE CITY ENGINEER DATE DEC 2013

1 PIPE BEDDING AND BACKFILL DETAIL
NTS



- NOTES:
- IF COPPER TUBING CROSSES CATHODICALLY PROTECTED LINE, ENCASE COPPER IN POLYETHYLENE TUBING FOR 24" (CENTERED AT THE CROSSING LINE) AND FASTEN WITH 2" WIDE ADHESIVE TAPE THAT IS COMPATIBLE WITH POLYETHYLENE.
 - PLACE METER BOXES (1) LOCATED BEHIND THE SIDEWALK WHERE THERE IS SUFFICIENT RIGHT-OF-WAY, (2) WITHIN THE PLANTER STRIP, EXCLUDING WATER QUALITY FACILITIES, (3) WITHIN THE SIDEWALK WITH THE BACK OF THE METER BOX AT THE BACK EDGE OF THE SIDEWALK.
 - CONNECT GALVANIZED SERVICE PIPE: (1) AT EXISTING THREADED FITTING WITHIN 5 FEET OF WATER METER; (2) RETHREAD EXISTING GALVANIZED SERVICE PIPE; (3) IF EXISTING PIPE IS IN POOR CONDITION AND CANNOT BE RETHREADED, USE UNTHREADED GALVANIZED PIPE CONNECTION DETAIL.

CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Standard 1.5 - 2 Inch Water Service

APPROVED: *Gay Nelson* 12/13
 DATE: 12/13
 NO. 402
 REVISIONS: _____ DATE BY _____
 MILWAUKIE CITY ENGINEER DATE DEC 2013

2 STANDARD 1 1/2" AND 2" WATER SERVICE
NTS



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

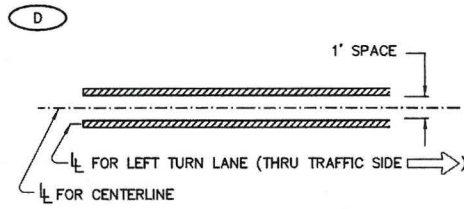
PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
CIVIL SITE DETAILS
UTILITY DETAILS

NO.	DATE	REVISION	BY

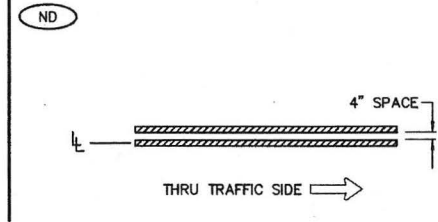
SCALE: AS SHOWN
DATE: 4-1-2014
DRN. BAR
CK. SDH

C506
JOB NO. MAEX0000-0021



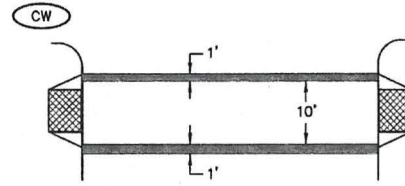
**DOUBLE NO-PASS
TWO 4" YELLOW LINES**

13 NONE



**NARROW DOUBLE NO-PASS
TWO 4" YELLOW LINES**

9 NONE



**STANDARD CROSSWALK
TWO 12" WHITE BARS**

5 NONE



4" WHITE LINE

1 NONE

GENERAL NOTES

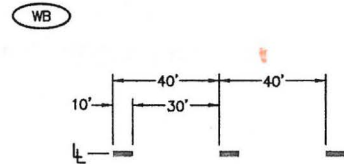
1. CENTER PAVEMENT MARKINGS WITHIN THE LANE WIDTH.
2. ARROW, LETTER AND BIKE SYMBOL DIMENSIONS NOMINAL.
3. LANE LINES ARE METHOD "E" EXTRUDED, 120 MIL THERMOPLASTIC. ARROWS AND STOP LINES ARE TYPE B THERMOPLASTIC.

LEGEND

- ← DIRECTION OF TRAFFIC, INCREASING STATIONING OR THRU TRAFFIC SIDE.
- L — LANE LINE DIMENSIONS ARE SHOWN ON THE STRIPING PLANS.

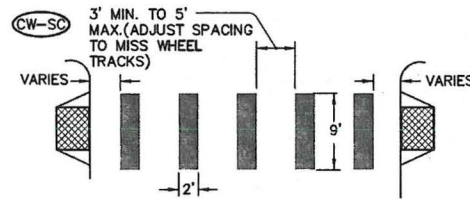
STRIPING NOTES AND LEGEND

14 NONE



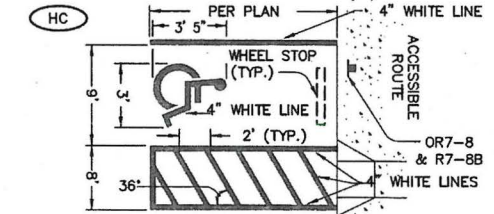
4" WHITE BROKEN LINE

10 NONE



**STAGGERED CONTINENTAL
CROSSWALK 24" WHITE BARS**

6 NONE



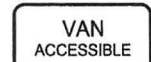
DISABLED PARKING, TYP.

2 NONE

SIGN NO. OR7-8



SIGN NO. OR7-8B

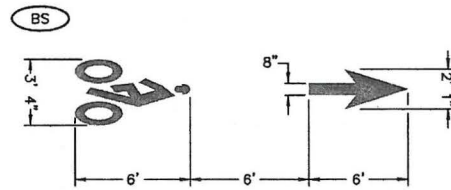


12"x 18"

NOTE:
SIGN MUST BE MOUNTED 7' (3"±) ABOVE FINISHED GRADE MEASURED FROM THE BOTTOM EDGE OF THE SIGN.

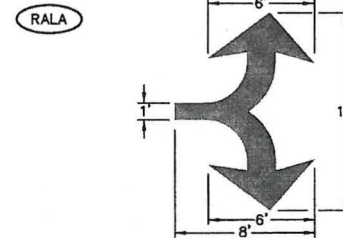
ADA PARKING SIGN

15 NONE



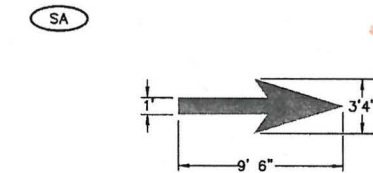
BIKE LANE STANDARD STENCIL

11 NONE



RIGHT TURN/LEFT TURN ARROW

7 NONE



STRAIGHT ARROW

3 NONE

NOTES:

1. A SIGN WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY MOUNTED HIGH ENOUGH SO IT CAN BE SEEN WHILE A VEHICLE IS PARKED IN THE SPACE SHALL BE PROVIDED.
2. IF THE ACCESSIBLE ROUTE IS LOCATED IN FRONT OF THE SPACE, INSTALL WHEELSTOPS TO KEEP VEHICLES FROM REDUCING WIDTH BELOW 36 INCHES.
3. ACCESS AISLE TO BE THE SAME LENGTH AS THE ADJACENT PARKING SPACE(S) IT SERVES AND MUST CONNECT TO AN ACCESSIBLE ROUTE TO THE BUILDING. RAMPS MUST NOT EXTEND INTO THE ACCESS AISLE. BOUNDARY OF THE ACCESS AISLE MUST BE MARKED. THE END MAY BE A SQUARED OR CURVED SHAPE. TWO PARKING SPACES MAY SHARE AN ACCESS AISLE.
4. PARKING SPACES AND ACCESS ISLE MUST BE LEVEL (2% MAXIMUM SLOPE IN ANY DIRECTION)
5. AT LEAST ONE ACCESSIBLE PARKING SPACE MUST BE VAN-ACCESSIBLE. PROVIDE AN ADDITIONAL SIGN THAT IDENTIFIES THE PARKING SPACES AS "VAN ACCESSIBLE."

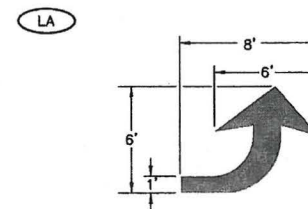
ADA PARKING NOTES

16 NONE



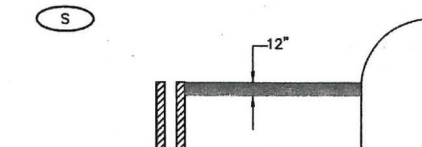
8" WHITE LINE

12 NONE



LEFT TURN ARROW

8 NONE



STOP BAR - 12" WHITE BAR

4 NONE



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CITY OF MILWAUKIE

DEPARTMENT CITY LANDSCAPE ARCHITECT

ARCHITECT COMMUNITY DEVELOPMENT

PUBLIC WORKS

PROJECT MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE CIVIL SITE DETAILS STRIPING DETAILS

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN. RFH
CK. SDH

C507
JOB NO. MAEX0000-0021



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 Fax: 503.223.2701

CITY OF MILWAUKIE	DEPARTMENT	CITY LANDSCAPE ARCHITECT
	ARCHITECT	COMMUNITY DEVELOPMENT
SIGNATURE		
APPROVAL DATE		

PROJECT
 MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

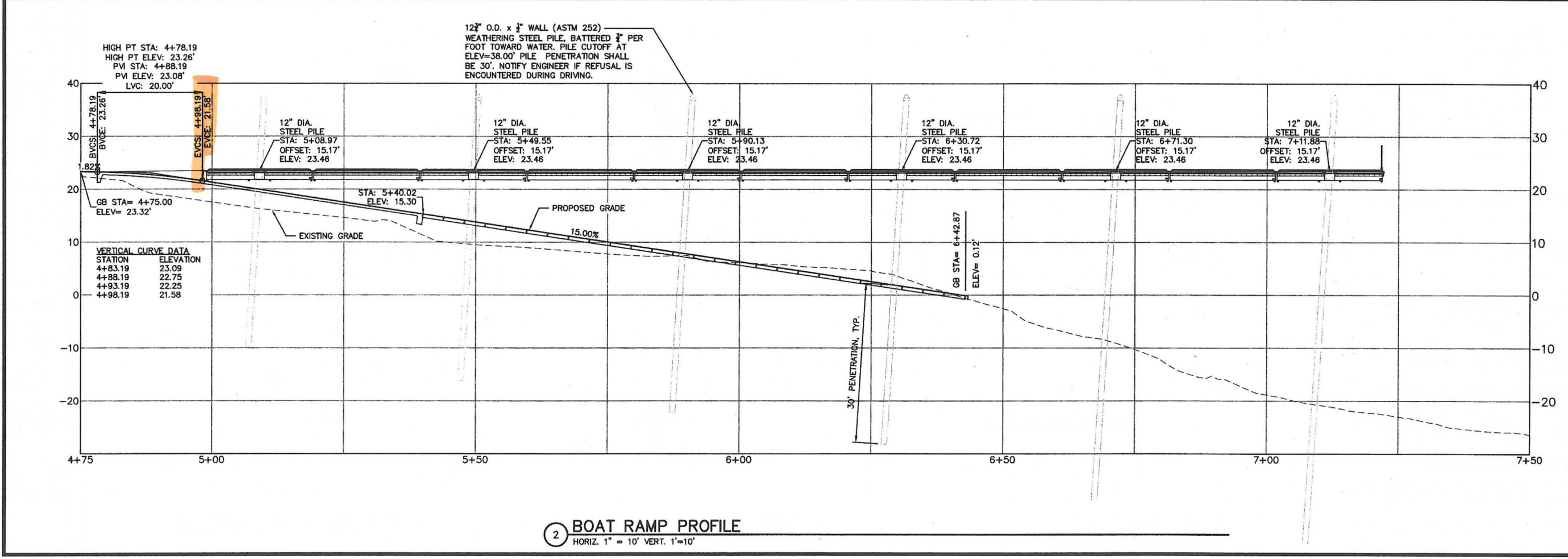
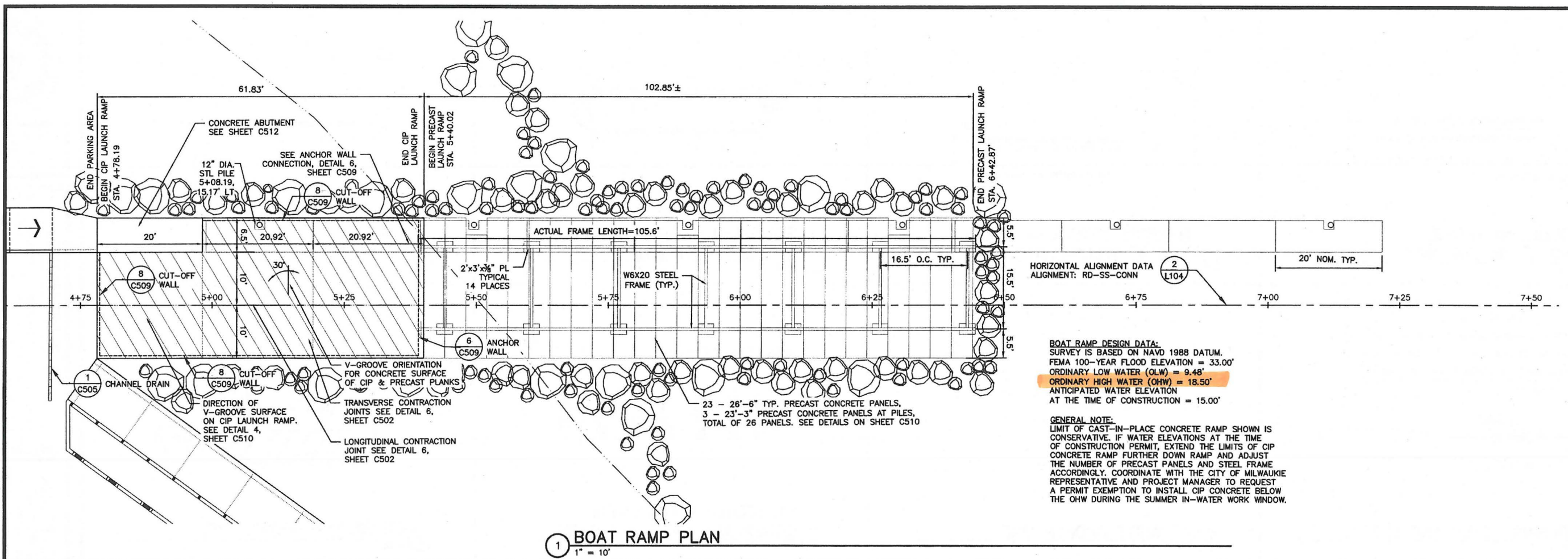
SHEET TITLE
 CIVIL SITE DETAILS
 MARINE DETAILS

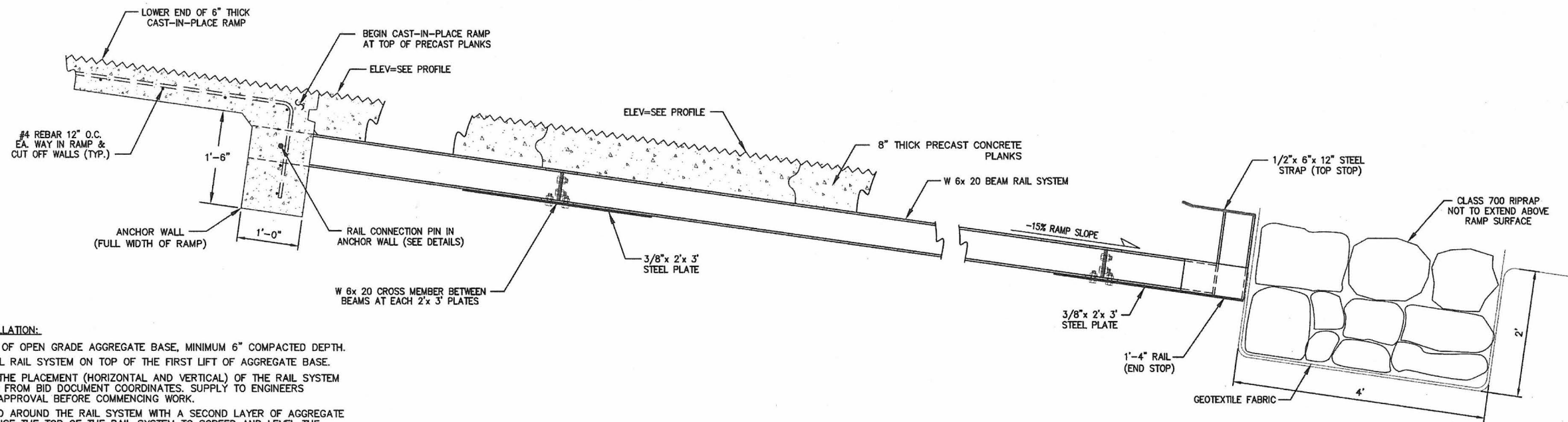
NO.	DATE	REVISION	BY



SCALE: AS SHOWN
 DATE: 4-1-2014
 DRN. BAR
 CK. SDH

C508
 JOB NO. MAEX0000-0021

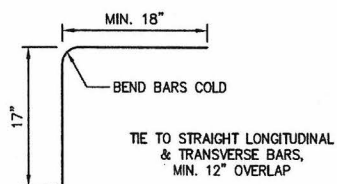
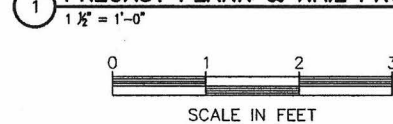




STEEL RAIL SYSTEM INSTALLATION:

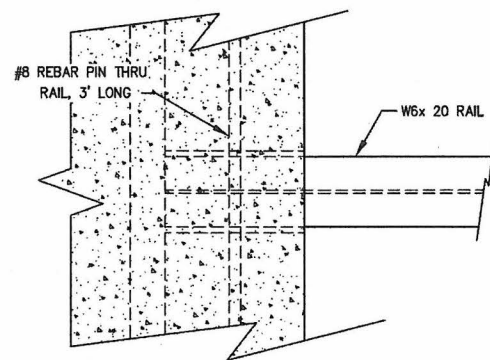
1. PLACE THE FIRST LIFT OF OPEN GRADE AGGREGATE BASE, MINIMUM 6" COMPACTED DEPTH.
2. THEN PLACE THE STEEL RAIL SYSTEM ON TOP OF THE FIRST LIFT OF AGGREGATE BASE.
3. SURVEYOR TO VERIFY THE PLACEMENT (HORIZONTAL AND VERTICAL) OF THE RAIL SYSTEM AND SHOW DEVIATIONS FROM BID DOCUMENT COORDINATES. SUPPLY TO ENGINEERS REPRESENTATIVE FOR APPROVAL BEFORE COMMENCING WORK.
4. THEN, BACKFILL IN AND AROUND THE RAIL SYSTEM WITH A SECOND LAYER OF AGGREGATE BASE. COMPACT AND USE THE TOP OF THE RAIL SYSTEM TO SCREED AND LEVEL THE ROCK.
5. AFTER CHECKING THAT THE RAIL SYSTEM HASN'T MOVED DURING ROCK INSTALLATION, THE CONTRACTOR MAY BEGIN PLACING THE PRECAST CONC. PLANKS.

1 PRECAST PLANK & RAIL PROFILE

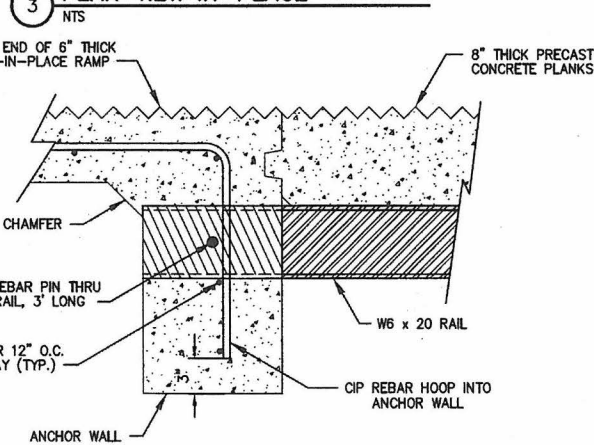


2 REBAR "L" DETAIL

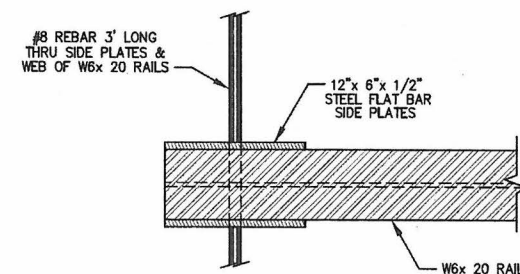
NTS
REBAR "L"'S SHALL EXTEND INTO THE ANCHOR WALL AND CUTOFF WALLS, SPACED 12" O.C.



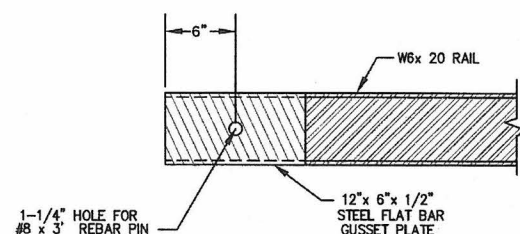
3 PLAN VIEW IN-PLACE



6 ANCHOR WALL SECTION

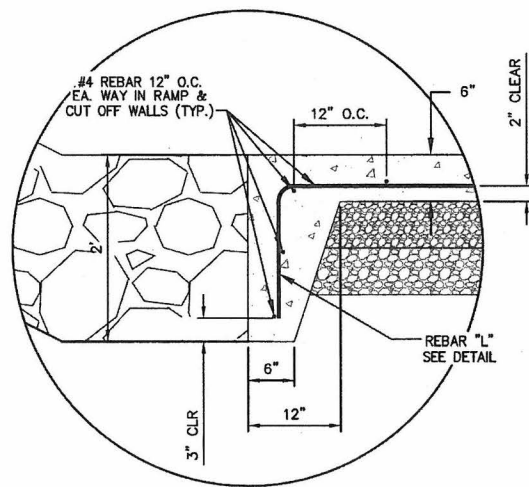


4 RAIL PLAN VIEW

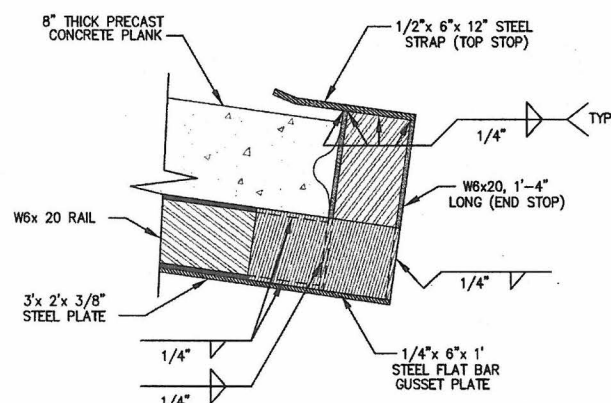


5 RAIL SIDE ELVATION

ANCHOR WALL CONNECTION DETAIL



8 CUT-OFF WALL DETAIL



7 END STOP DETAIL



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CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
		PUBLIC WORKS

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS MARINE DETAILS

NO.	DATE	REVISION	BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

C509
JOB NO. MAEX0000-0021

Drawing File: \\Pdrfs1\project\MAEX00000021\CADD\CADD\SHEETS\C509-MAE21-MARIN_DTLSDWG Date/Time: Mar 26, 2014 - 3:45pm User: sdh



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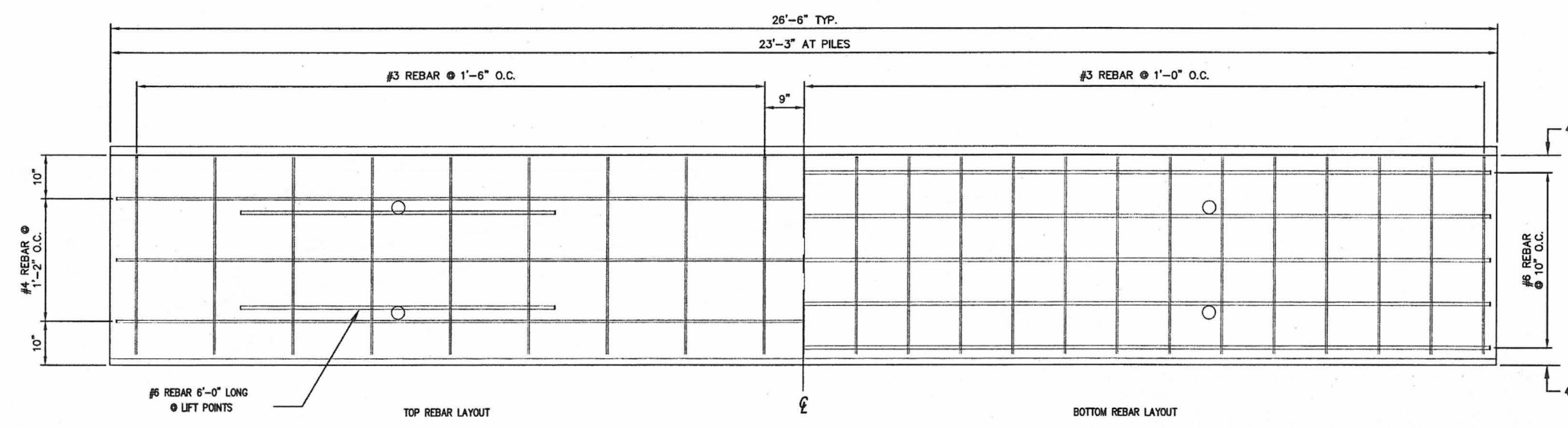
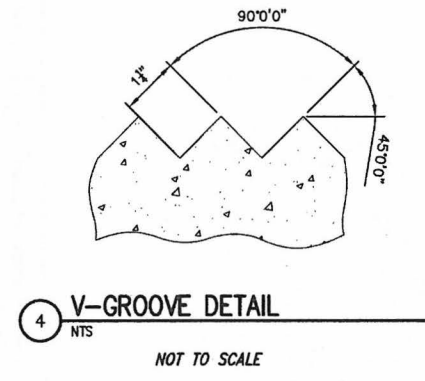
CITY OF MILWAUKIE	
DEPARTMENT	SIGNATURE
CITY LANDSCAPE ARCHITECT	APPROVAL DATE
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS MARINE DETAILS

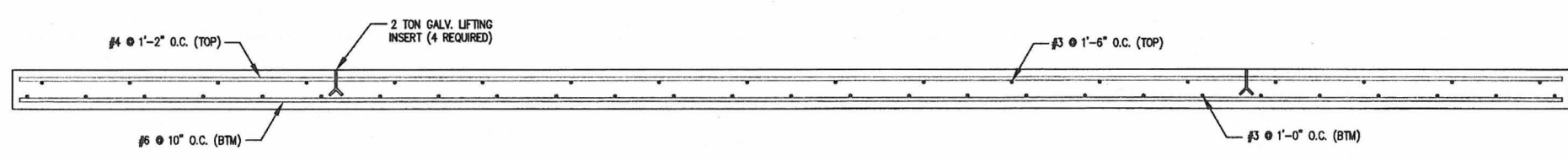
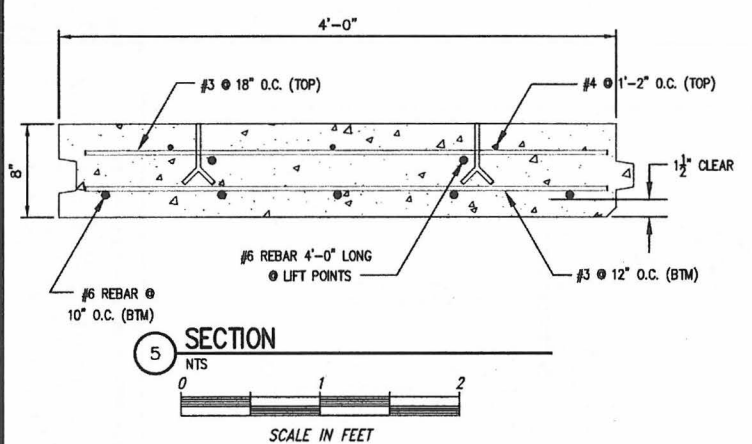
NO.	DATE	REVISION	BY

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DRN.	BAR
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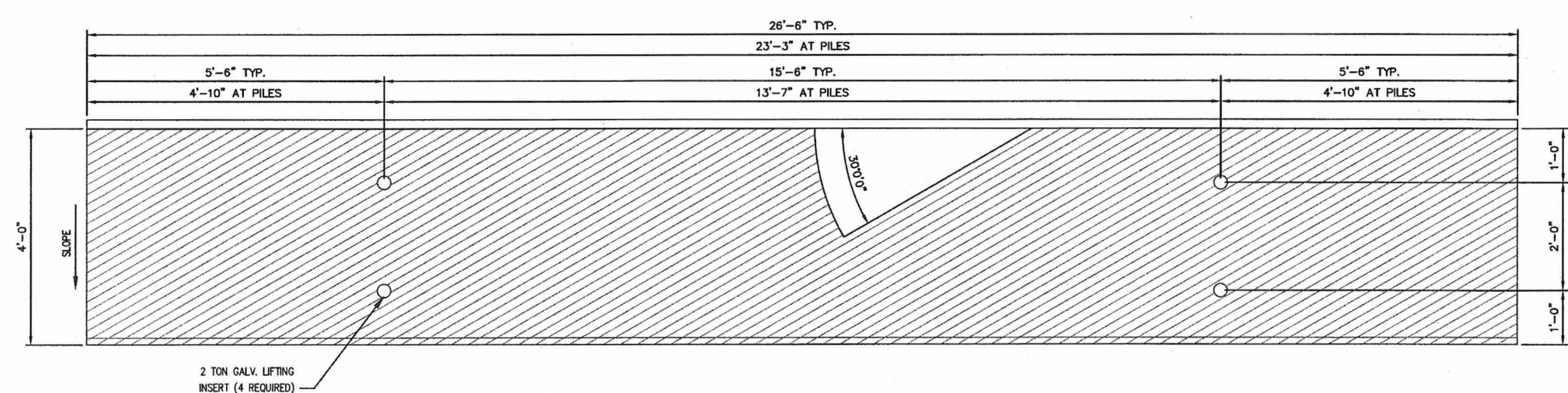
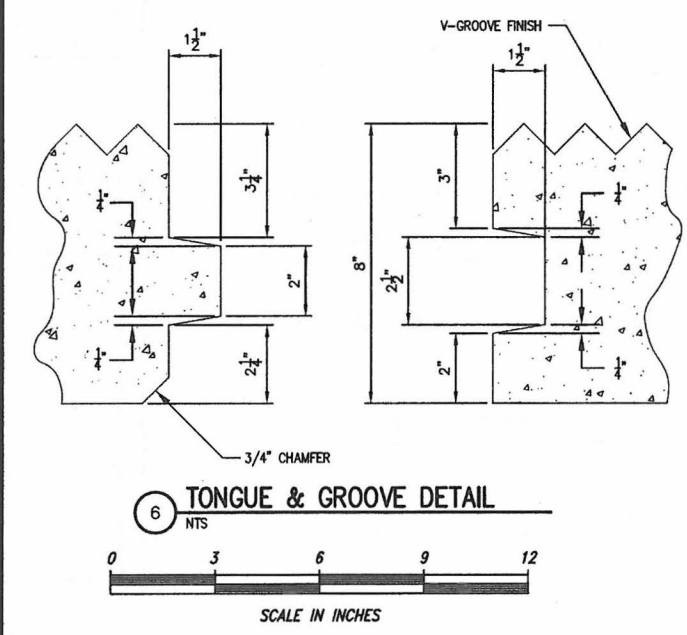
C510
 JOB NO. MAEX0000-0021



1 PRECAST CONCRETE BOAT LAUNCH - REBAR PLAN
 NTS



2 PRECAST CONCRETE BOAT LAUNCH - REBAR ELEVATION
 NTS



3 PRECAST CONCRETE BOAT LAUNCH - LIFTING INSERTS
 NTS

NOTE: PLANKS SHALL BE MANUFACTURED IN A PURPOSE-BUILT FORM WITH THE V-GROOVES CAST DURING PRODUCTION. HAND FINISHING IS NOT ALLOWED.

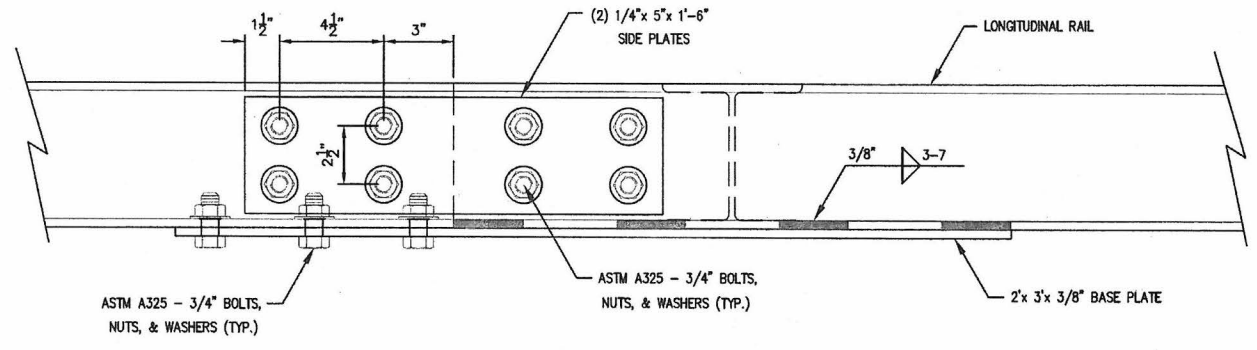
CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	
	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

PROJECT	MILWAUKIE RIVERFRONT PARK
	PHASE 2 - BOAT RAMP AND PATHWAY
	S. E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS
	MARINE DETAILS

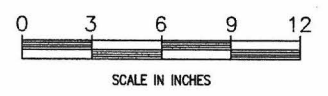
NO.	DATE	REVISION	BY

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CK.	SDH

C511
JOB NO. MAEX0000-0021

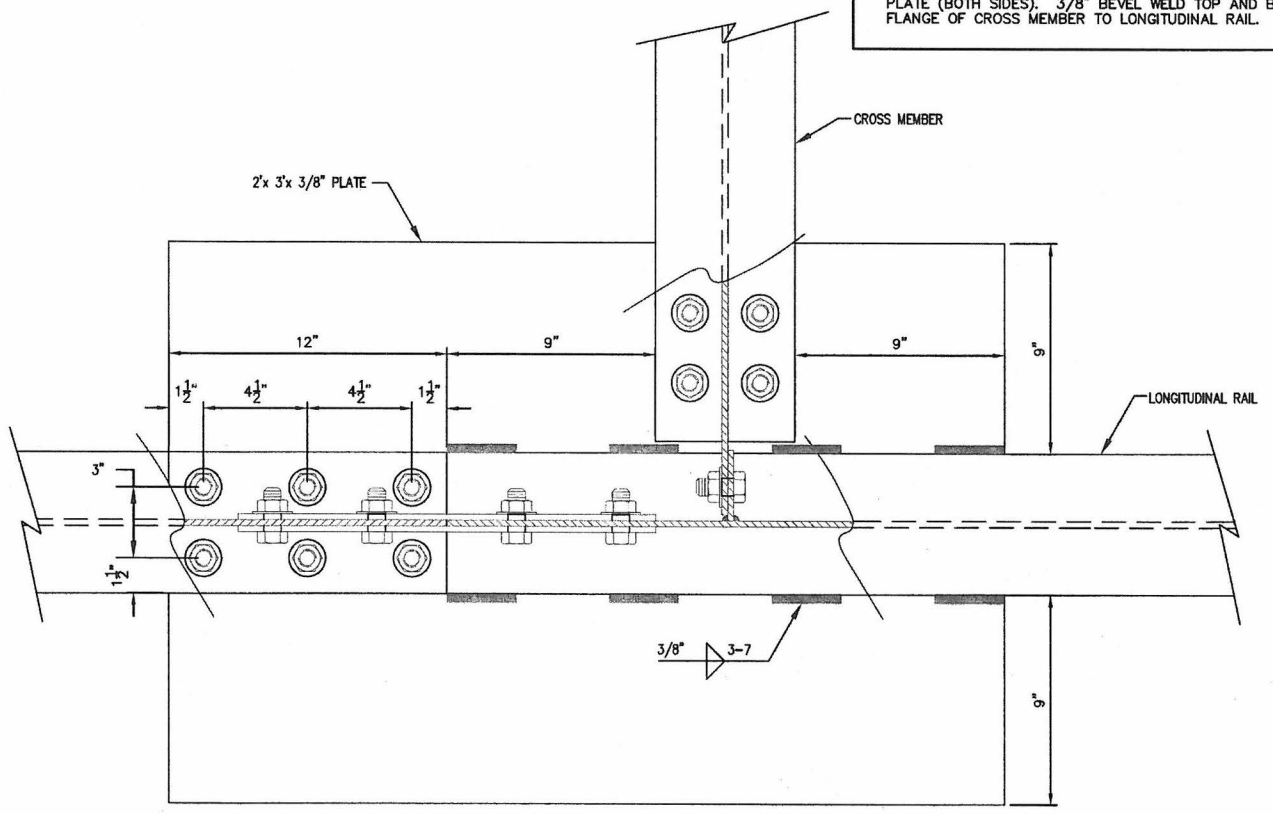


③ LONGITUDINAL RAIL SPLICE ELEVATION
1/8" = 1'-0"

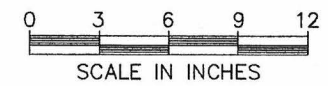


CONNECTION OPTION

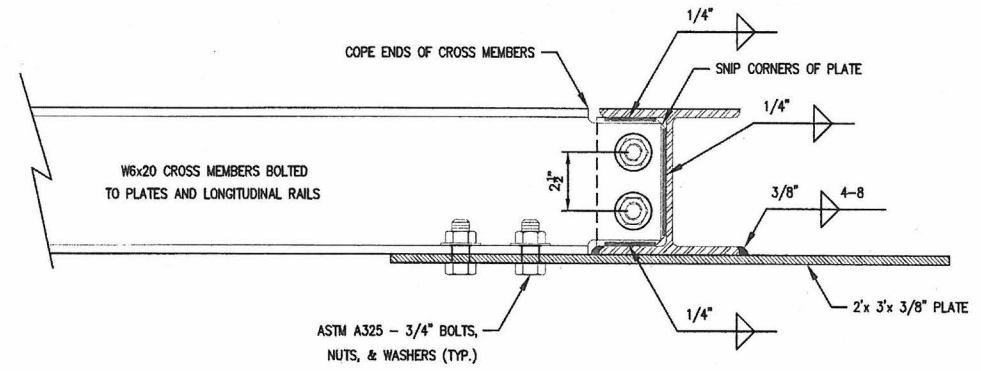
- BOLTED CONNECTIONS MAY BE REPLACED WITH WELDED CONNECTIONS AS FOLLOWS:
1. 1/4" x 5" x 1'-6" SIDE PLATES - CONTINUOUS 1/4" FILLET
 2. LONGITUDINAL RAIL SPLICE - 3/8" FILLET 4-8 (BOTH SIDES)
 3. COPEDED ENDS OF CROSS MEMBERS NOT REQUIRED. 3/8" CONTINUOUS FILLET WELD CROSS MEMBER BOTTOM FLANGE TO PLATE (BOTH SIDES). 3/8" BEVEL WELD TOP AND BOTTOM FLANGE OF CROSS MEMBER TO LONGITUDINAL RAIL.



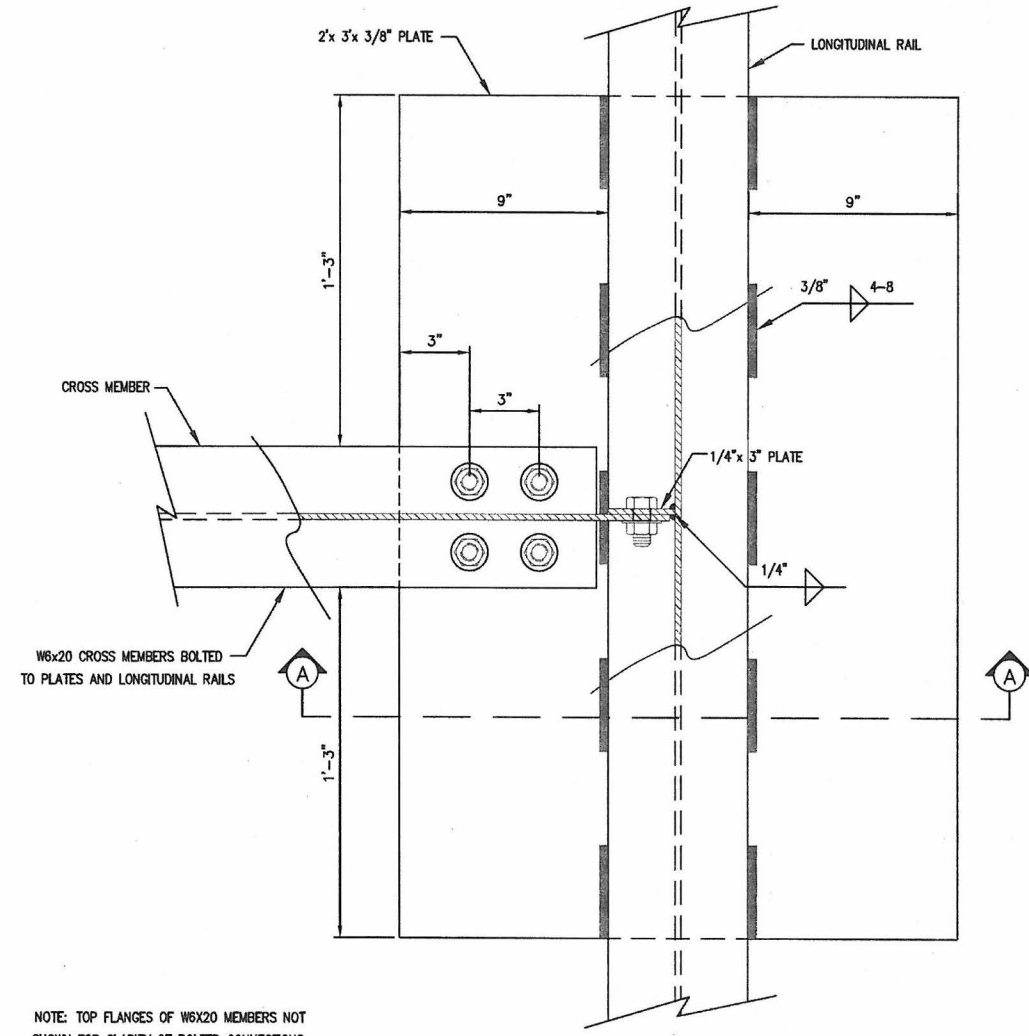
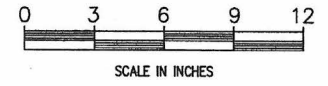
④ LONGITUDINAL RAIL SPLICE PLAN
1/8" = 1'-0"



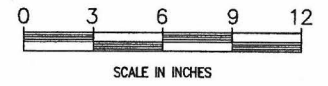
NOTE: TOP FLANGES OF W6X20 MEMBERS NOT SHOWN FOR CLARITY OF BOLTED CONNECTIONS.



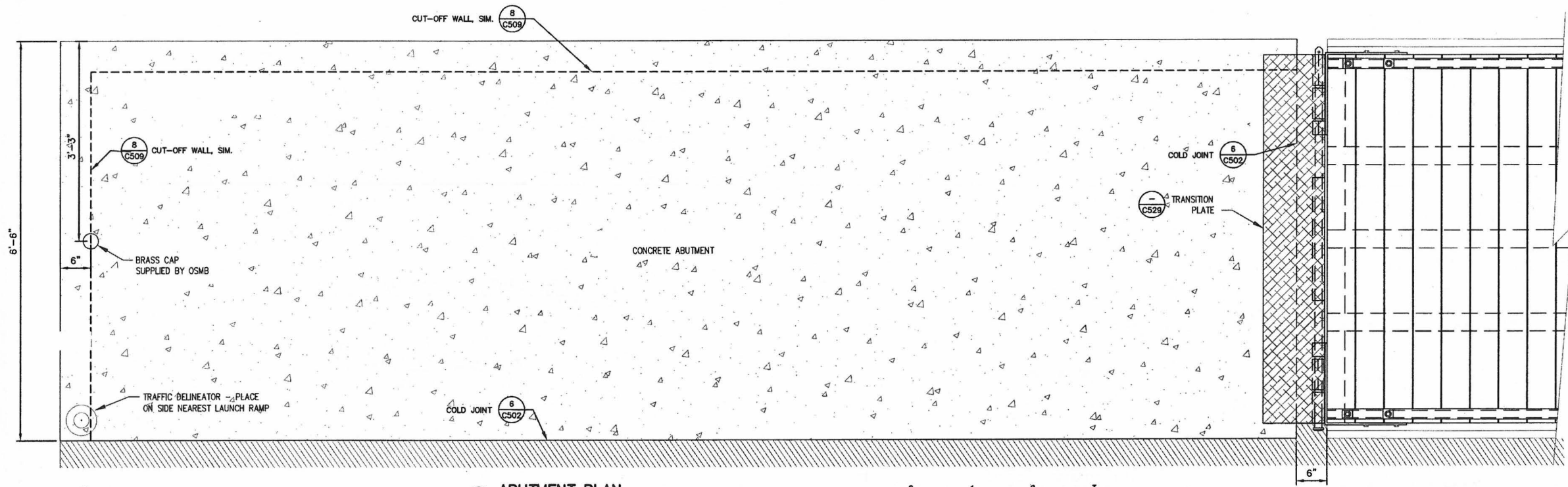
① CROSS MEMBER CONNECTION SECTION A-A
1/8" = 1'-0"



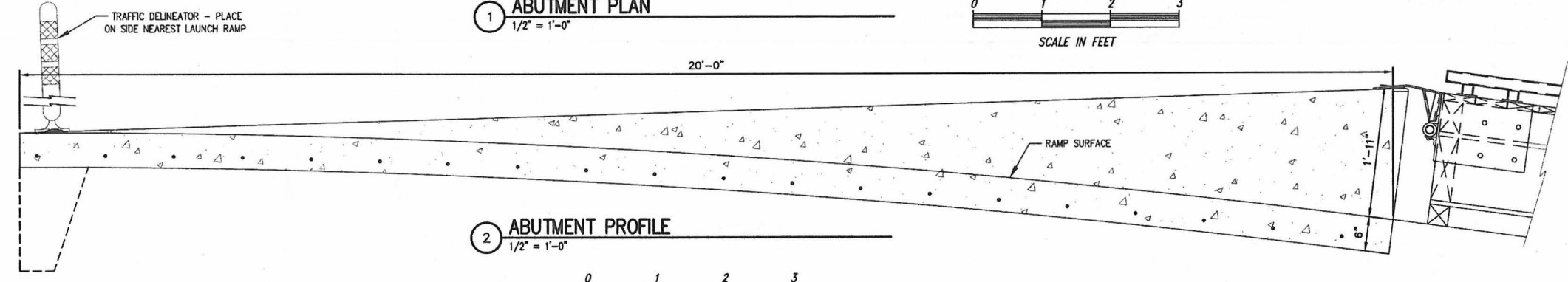
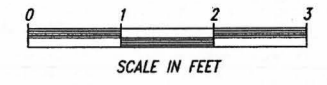
② CROSS MEMBER CONNECTION PLAN
1/8" = 1'-0"



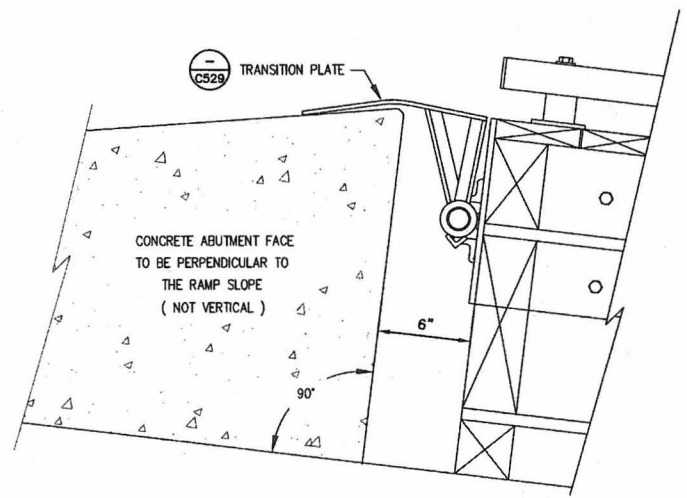
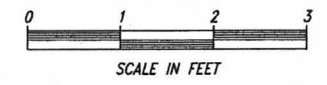
NOTE: TOP FLANGES OF W6X20 MEMBERS NOT SHOWN FOR CLARITY OF BOLTED CONNECTIONS.



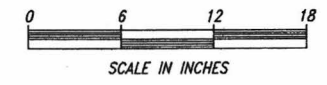
1 ABUTMENT PLAN
1/2" = 1'-0"



2 ABUTMENT PROFILE
1/2" = 1'-0"



3 ABUTMENT FACE PROFILE
NTS



NOTE:
SET PILES AT THE UPHILL
SIDE OF PILE HOOPS W/
6" CLEAR BETWEEN FLOAT
AND ABUTMENT



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DEPARTMENT	CITY LANDSCAPE ARCHITECT		
		COMMUNITY DEVELOPMENT	
		PUBLIC WORKS	

PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
CIVIL SITE DETAILS
MARINE DETAILS

User: sdh
Date/Time: Mar 26, 2014 -- 3:58pm

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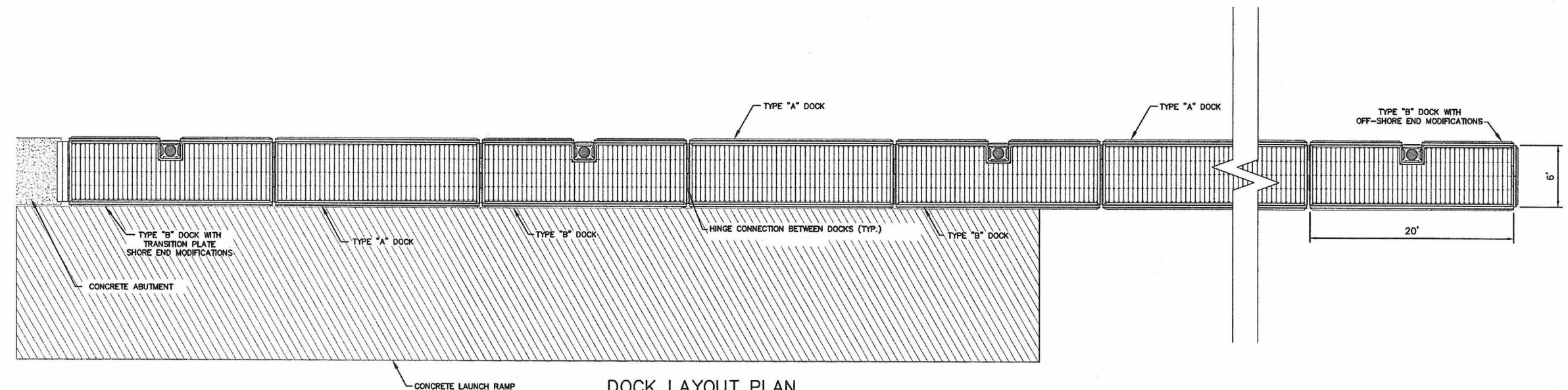
SCALE: AS SHOWN
DATE: 4-1-2014
DRN. BAR
CK. SDH

C512
JOB NO. MAEX0000-0021

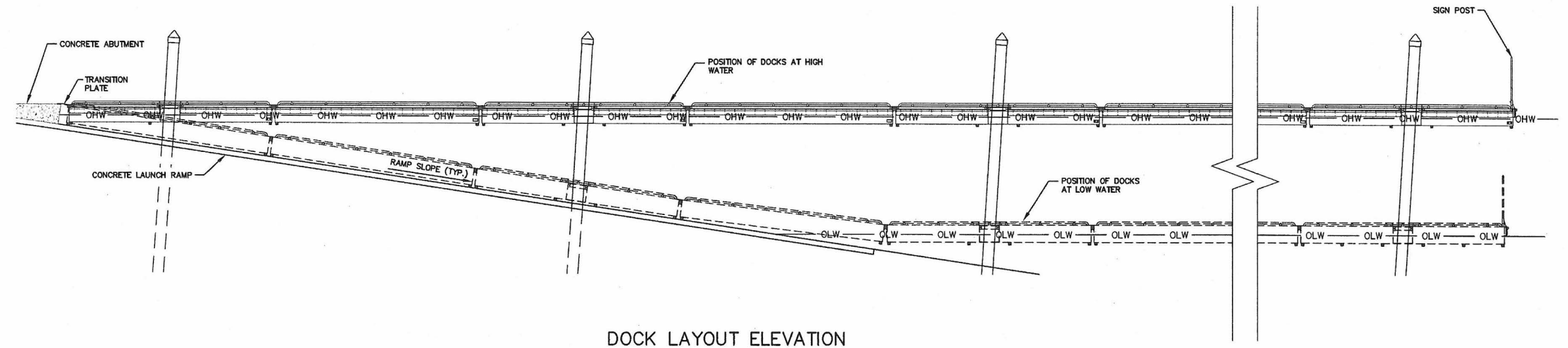
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1 DOCK LAYOUT PLAN
 TRANSITION PLATE AT ABUTMENT
 1" = 5'-0"



2 DOCK LAYOUT ELEVATION
 TRANSITION PLATE AT ABUTMENT
 1" = 5'-0"



CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT: MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: CIVIL SITE DETAILS
 MARINE DETAILS

NO.	DATE	REVISION BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

C513
 JOB NO. MAEX0000-0021

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COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS MARINE DETAILS

NO.	DATE	REVISION	BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN:	BAR
CK:	SDH

C514

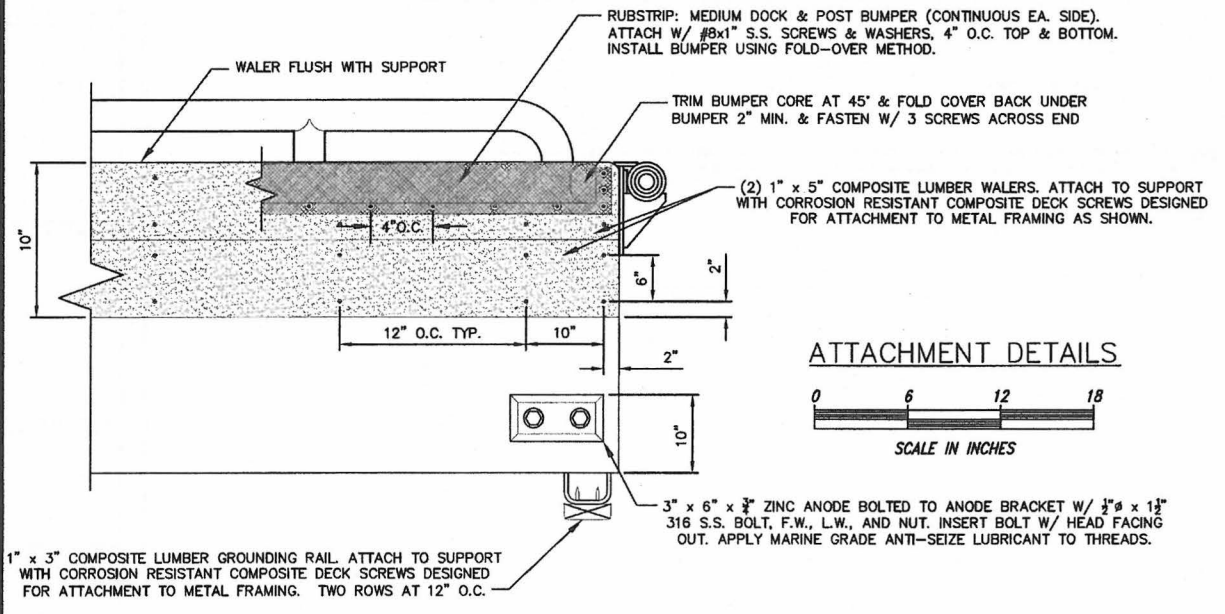
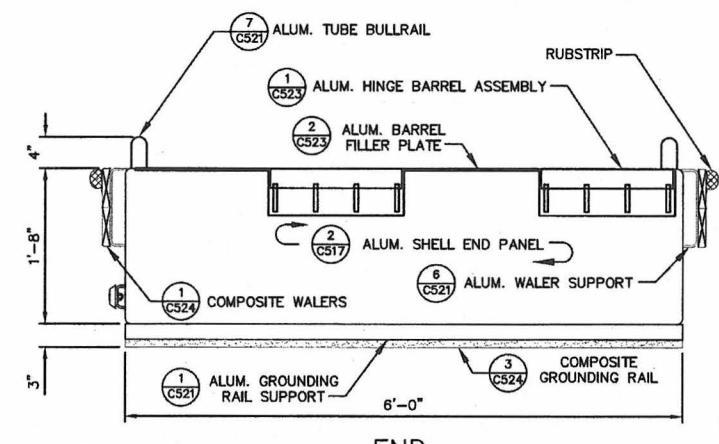
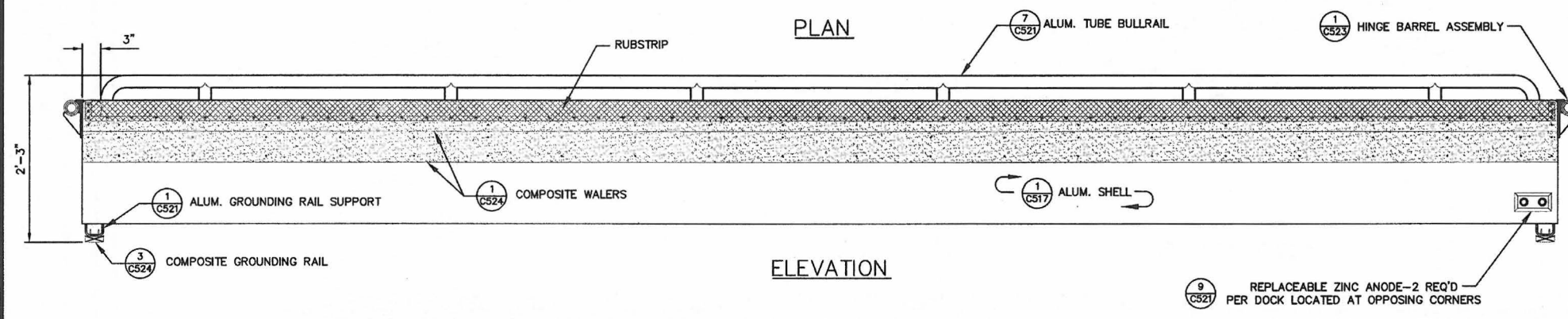
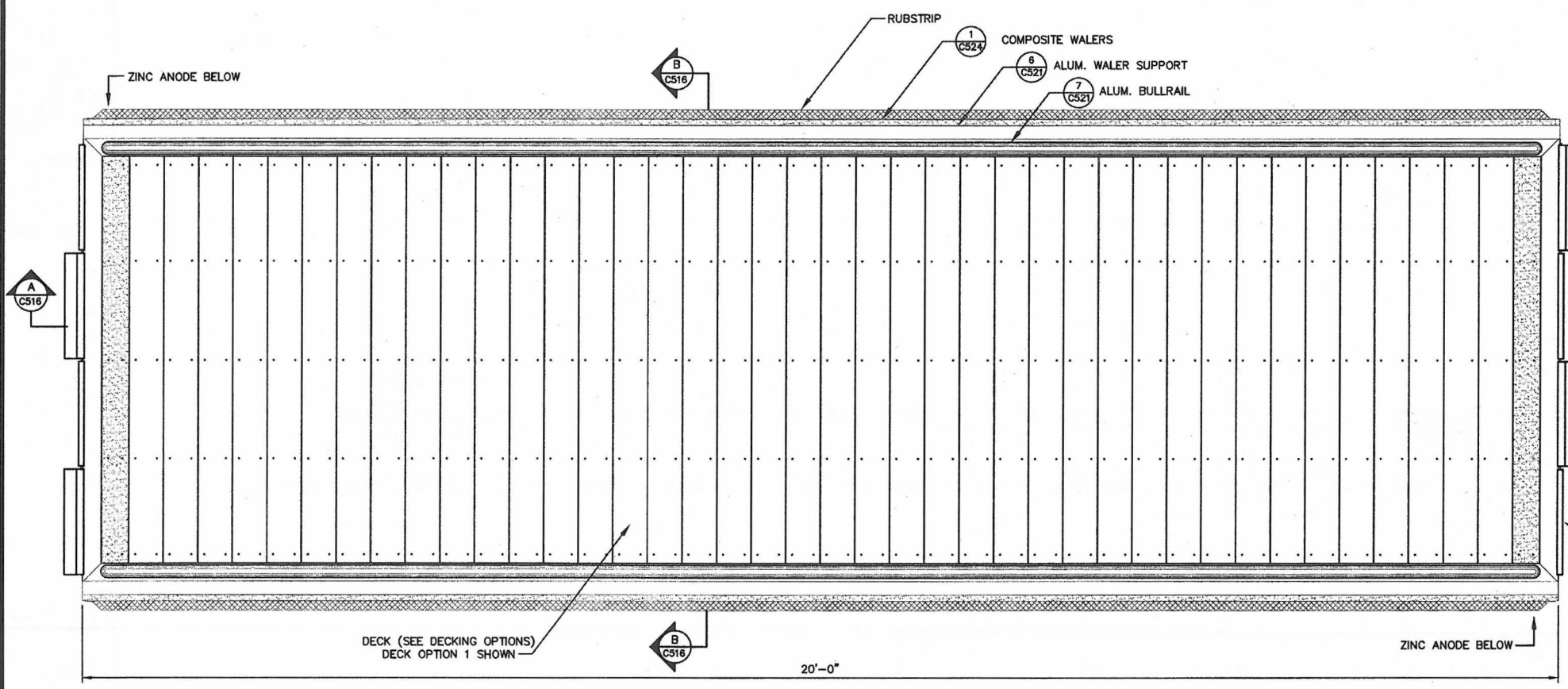
JOB NO. MAEX0000-0021

DECKING MATERIAL:
 3/4" COMPOSITE DECKING (1" THICKNESS) ATTACHED 2 PLACES AT EACH DECK SUPPORT USING SPECIALIZED FASTENERS PER SPECIFICATIONS.

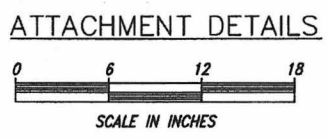
QUANTITIES: (5 TOTAL)
 QTY (5) REQUIRED AS SHOWN

1 ALUM. HINGE BARREL ASSEMBLY - 2 REQ'D EACH END.
 OTHER END MIRRORED ABOUT LONGITUDINAL CENTERLINE

2 ALUM. BARREL FILLER PLATE - 2 REQ'D EACH END.
 OTHER END MIRRORED ABOUT LONGITUDINAL CENTERLINE



1 ALUMINUM BOARDING DOCK (TYPE "A" DOCK)
 1" = 1'-0"



- ANTICIPATED ASSEMBLY SEQUENCE:**
- FABRICATE SHELL
 - INSTALL SHELL END PANELS
 - INSTALL GROUNDING RAIL SUPPORTS & GROUNDING RAILS
 - INSTALL BULKHEADS
 - INSTALL BOTTOM STIFFENERS
 - INSTALL END STIFFENERS
 - INSTALL BULLRAIL GUSSETS
 - INSTALL WALER SUPPORTS & ANODE BRACKETS
 - INSTALL HINGE BARREL ASSEMBLIES & FILLER PLATES
 - INSTALL BULLRAILS
 - SANDBLAST EXTERIOR TOP, SIDES, AND ENDS.
 - APPLY BARRIER COATING PRIOR TO PLACING CONCRETE
 - INSTALL CONCRETE BALLAST
 - INSTALL FOAM FLOATATION
 - INSTALL & SECURE TOP COVERS
 - INSTALL & SECURE TOP COVER SPACERS
 - INSTALL DECK SUPPORTS
 - INSTALL DECKING
 - INSTALL WALERS
 - INSTALL RUBSTRIPS
 - INSTALL ZINC ANODES

NOTES:
 1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

1" x 3" COMPOSITE LUMBER GROUNDING RAIL. ATTACH TO SUPPORT WITH CORROSION RESISTANT COMPOSITE DECK SCREWS DESIGNED FOR ATTACHMENT TO METAL FRAMING. TWO ROWS AT 12" O.C.

3" x 6" x 3/8" ZINC ANODE BOLTED TO ANODE BRACKET W/ 3/8" x 1 1/2" 316 S.S. BOLT, F.W., L.W., AND NUT. INSERT BOLT W/ HEAD FACING OUT. APPLY MARINE GRADE ANTI-SEIZE LUBRICANT TO THREADS.

Drawing File: \\Postest1\MAEX00000021\040000\0021\040000\0021\040000\0021\MARIN_DTL5.DWG Date/Time: Mar 26, 2014 4:43:30pm User: sgh



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CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	ARCHITECT
	COMMUNITY DEVELOPMENT	COMMUNITY DEVELOPMENT
	PUBLIC WORKS	PUBLIC WORKS

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: CIVIL SITE DETAILS
MARINE DETAILS

NO.	DATE	REVISION	BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN:	BAR
CK:	SDH

C515
JOB NO. MAEX0000-0021

DECKING MATERIAL:
¾" COMPOSITE DECKING (1" THICKNESS) ATTACHED 2 PLACES AT EACH DECK SUPPORT USING SPECIALIZED FASTENERS PER SPECIFICATIONS.

QUANTITIES: (6 TOTAL)
QTY (4) REQUIRED AS SHOWN
ONE (1) REQUIRED WITH NO HINGE BARREL ASSEMBLY ON ONE END
ONE (1) REQUIRED WITH TRANSITION PLATE HINGE ASSEMBLY ON ONE END

1 ALUM. HINGE BARREL ASSEMBLY - 2 REQ'D EACH END. OTHER END MIRRORED ABOUT LONGITUDINAL CENTERLINE

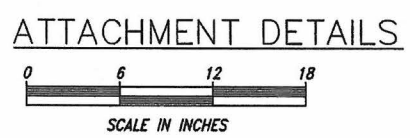
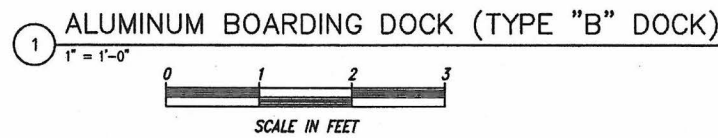
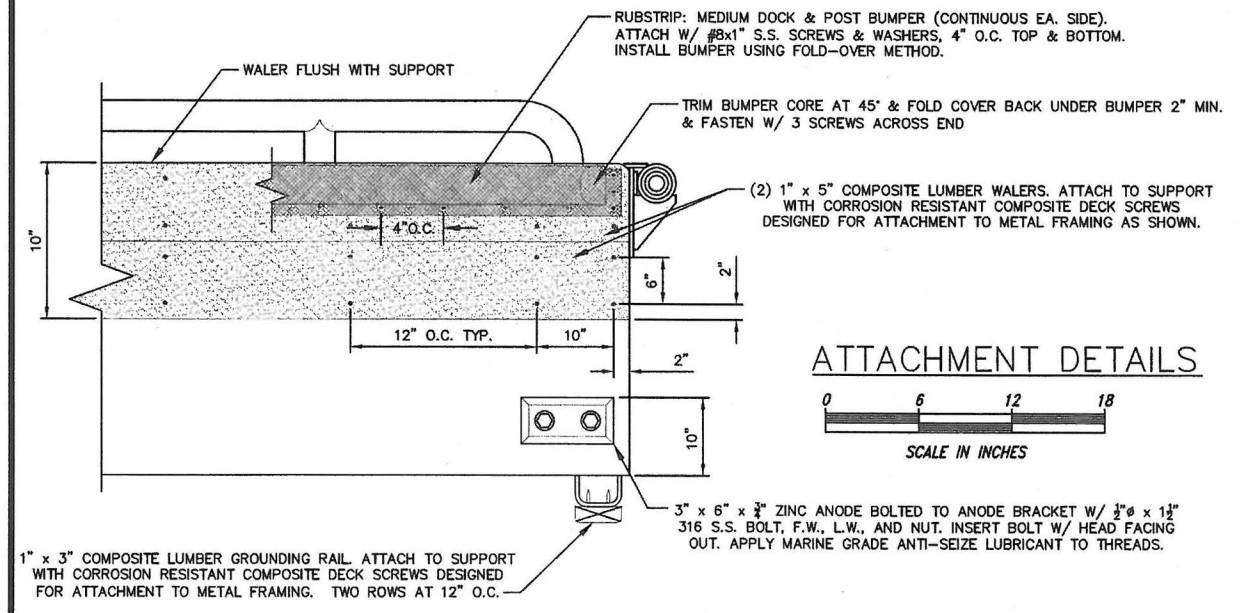
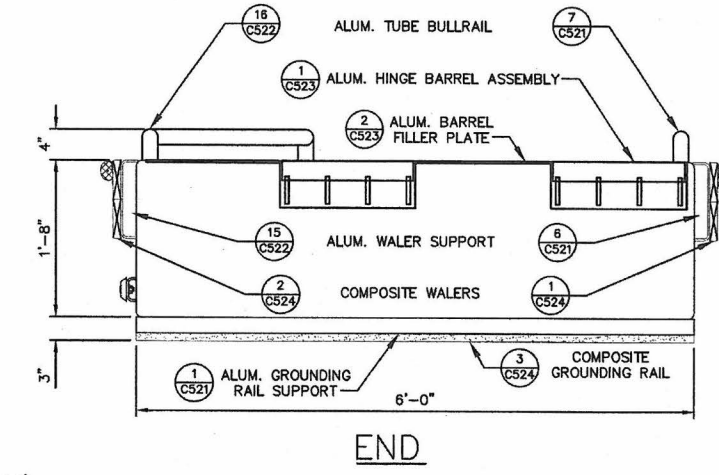
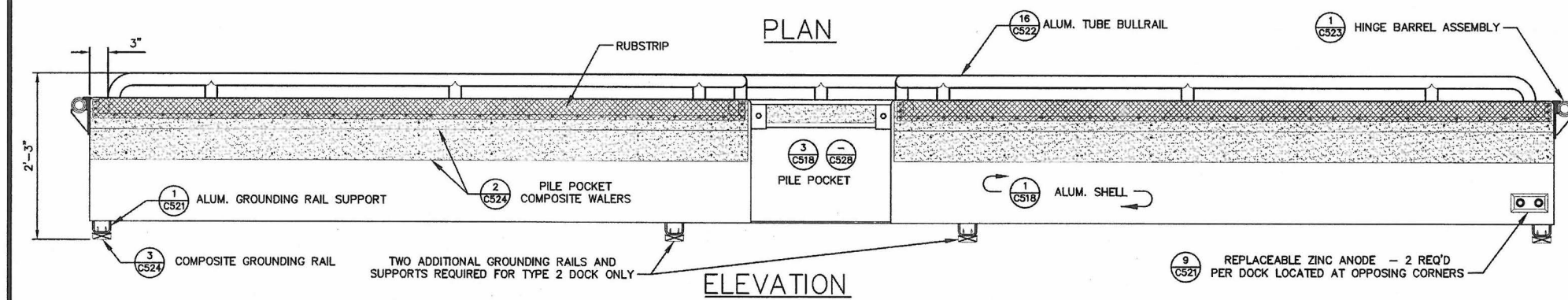
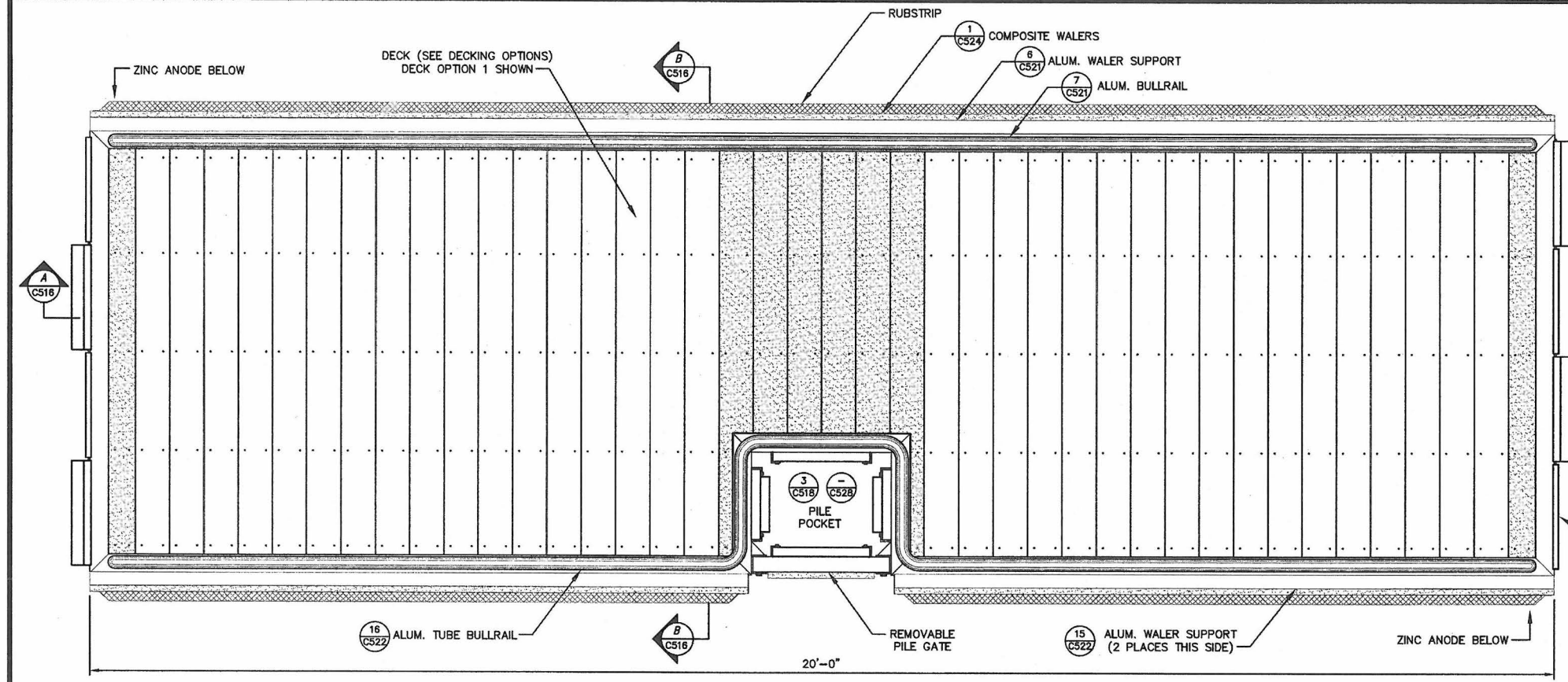
2 ALUM. BARREL FILLER PLATE - 2 REQ'D EACH END. OTHER END MIRRORED ABOUT LONGITUDINAL CENTERLINE

9 REPLACEABLE ZINC ANODE - 2 REQ'D PER DOCK LOCATED AT OPPOSING CORNERS

NOTES:
1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATION.
2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

ANTICIPATED ASSEMBLY SEQUENCE:

- FABRICATE SHELL
- INSTALL SHELL END PANELS
- INSTALL GROUNDING RAIL SUPPORTS & GROUNDING RAILS
- INSTALL BULKHEADS
- INSTALL BOTTOM STIFFENERS
- INSTALL END STIFFENERS
- INSTALL BULLRAIL GUSSETS
- INSTALL WALER SUPPORTS & ANODE BRACKETS
- INSTALL HINGE BARREL ASSEMBLIES & FILLER PLATES
- INSTALL BULLRAILS
- SANDBLAST EXTERIOR TOP, SIDES, AND ENDS.
- APPLY BARRIER COATING PRIOR TO PLACING CONCRETE
- INSTALL CONCRETE BALLAST
- INSTALL FOAM FLOATATION
- INSTALL & SECURE TOP COVERS
- INSTALL & SECURE TOP COVER SPACERS
- INSTALL DECK SUPPORTS
- INSTALL DECKING
- INSTALL WALERS
- INSTALL RUBSTRIPS
- INSTALL ZINC ANODES



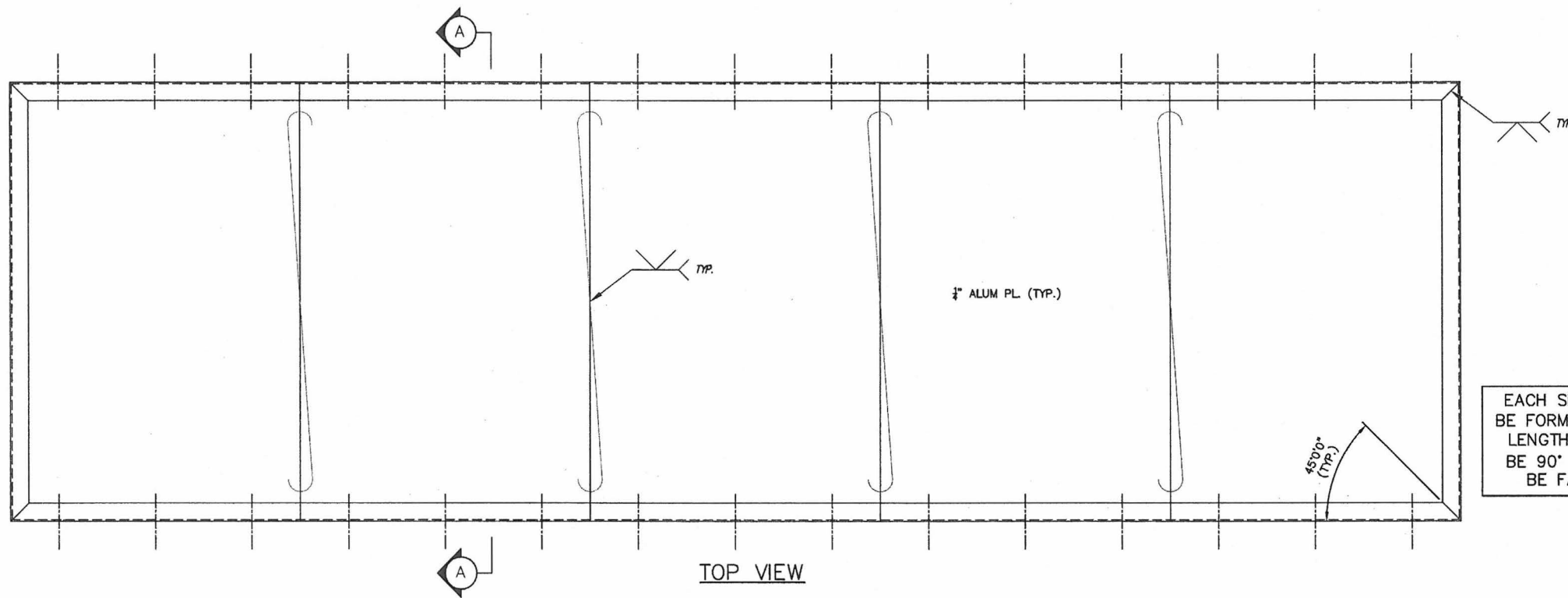
User: ahh Date/Time: Mar 26, 2014 - 4:14pm Drawing File: \\pdris1\project\MAEX000000021\04000000\SHEETS\C513-MAEX21-MARIN_DTL3.DWG



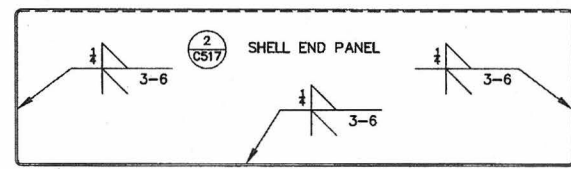
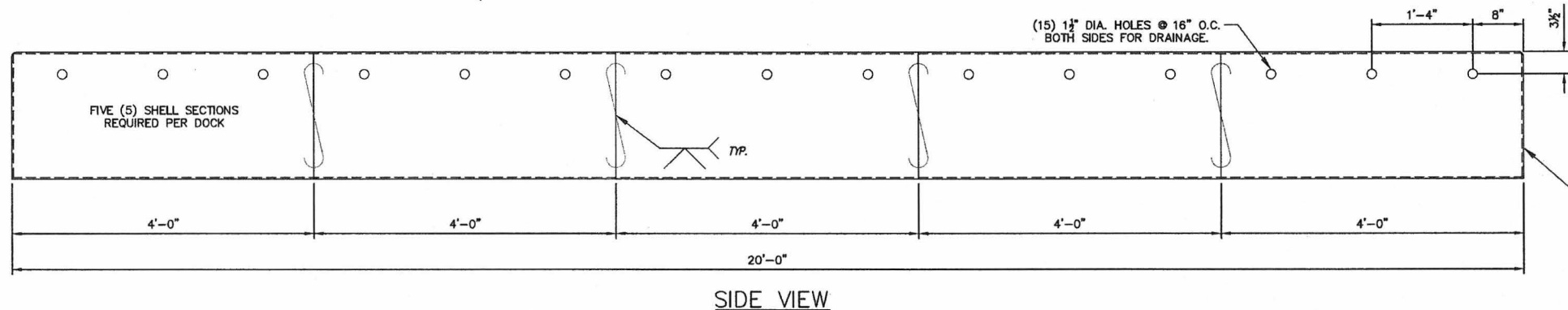
2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

NOTES:
 1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

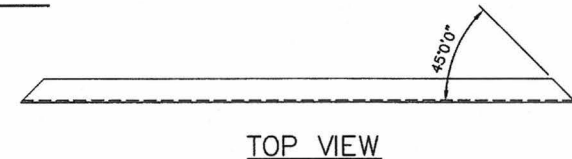
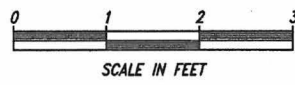


EACH SHELL SECTION (BOTTOM, SIDES AND TOP FLANGES) SHALL BE FORMED BY BENDING 4' x 10' SHEETS OF ALUM. PLATE CUT TO LENGTH TO MEET DIMENSION REQUIREMENTS. ALL BENDS SHALL BE 90° WITH MAX. 1/2" INSIDE RADII. SHELL SECTIONS SHALL NOT BE FABRICATED FROM SEPARATE PIECES WELDED TOGETHER.

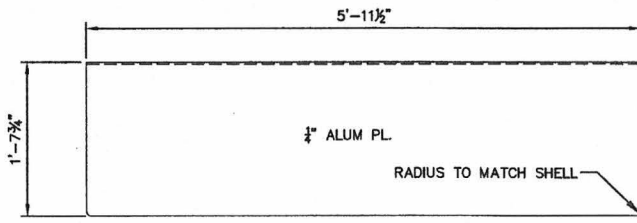


SHELL END PANEL INSET AND FLUSH WITH END OF SHELL

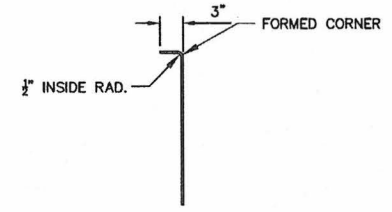
1 SHELL DETAILS (TYPE "A" DOCK)
 1" = 1'-0"



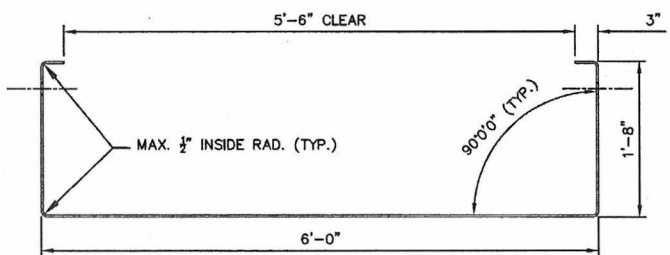
TOP VIEW



END VIEW



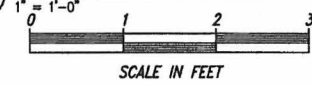
SIDE VIEW



SECTION A-A



2 SHELL END PANEL
 1" = 1'-0"



PROJECT
**MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY**
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
**CIVIL SITE DETAILS
 MARINE DETAILS**

NO.	DATE	REVISION	BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

C517

JOB NO. MAEX0000-0021

Drawing File: \\Peridot\Project\MAEX\00000021\4400CAD\SHETS\C517-MAEX21-MARIN DTLS.DWG Date/Time: Mar 26, 2014 - 4:19pm User: adh



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 Phone: 503.223.6683
 Fax: 503.223.2701

CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	DEPARTMENT	
CITY LANDSCAPE ARCHITECT	ARCHITECT	
	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

PROJECT: MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

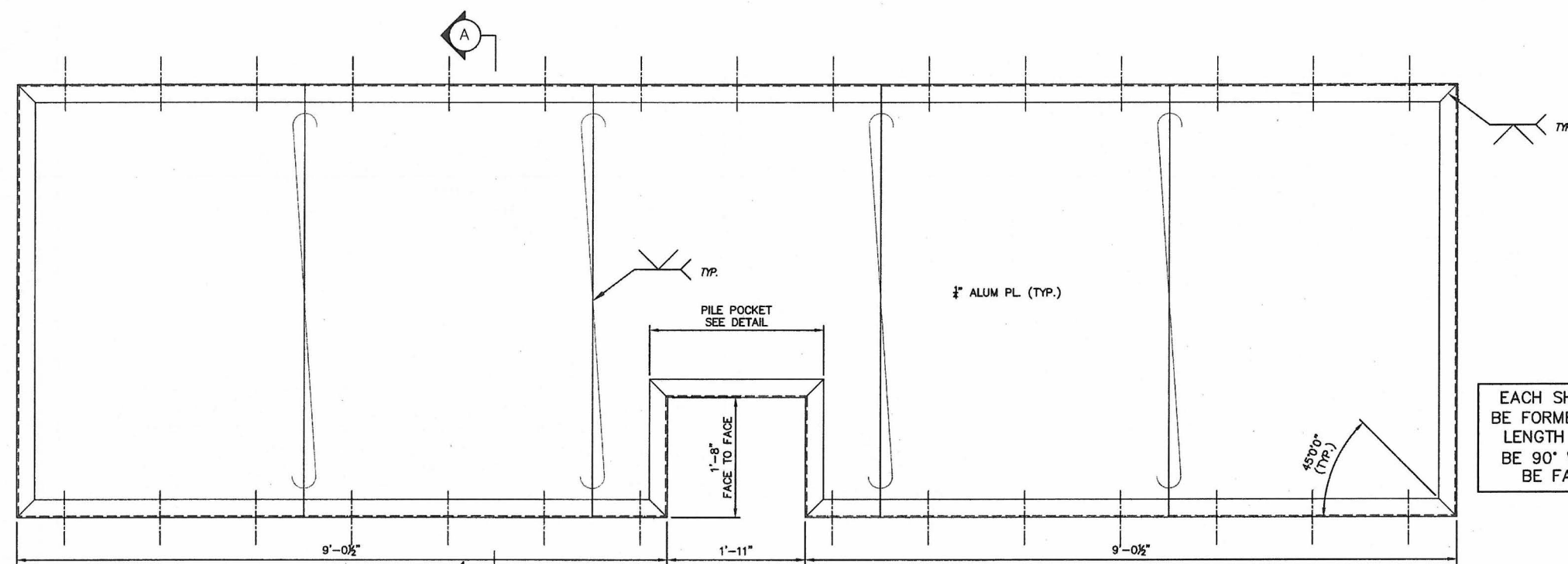
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 MARINE DETAILS

DATE/TIME: Mar 26, 2014 - 4:12 pm User: sgh

NO.	DATE	REVISION	BY

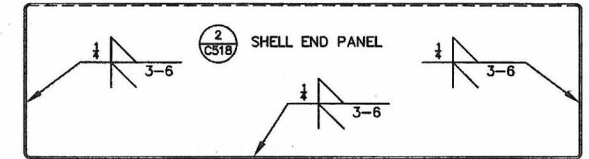
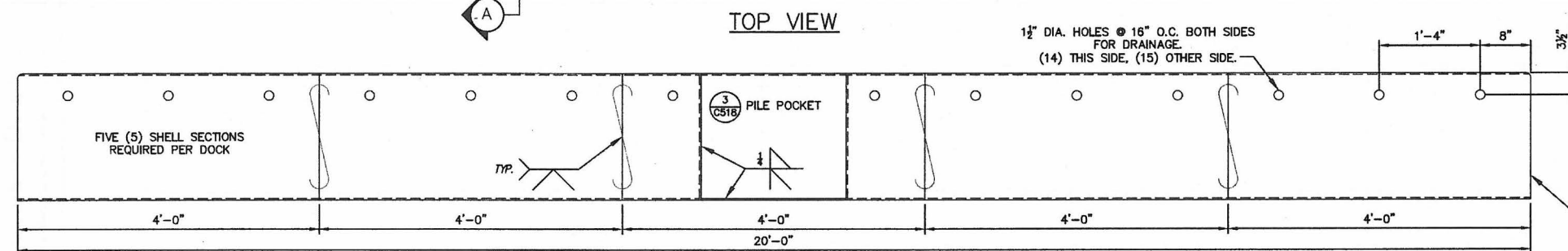
SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

C518
 JOB NO. MAEX0000-0021

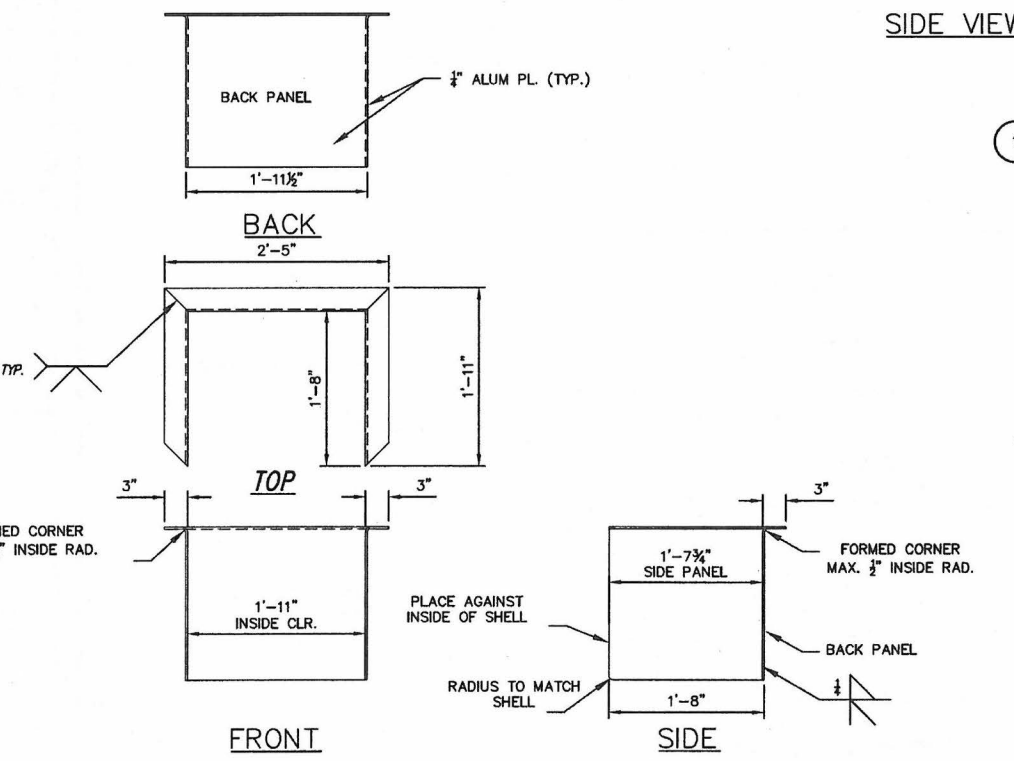


NOTES:
 1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

EACH SHELL SECTION (BOTTOM, SIDES AND TOP FLANGES) SHALL BE FORMED BY BENDING 4' x 10' SHEETS OF ALUM. PLATE CUT TO LENGTH TO MEET DIMENSION REQUIREMENTS. ALL BENDS SHALL BE 90° WITH MAX. 1/2" INSIDE RADII. SHELL SECTIONS SHALL NOT BE FABRICATED FROM SEPARATE PIECES WELDED TOGETHER.

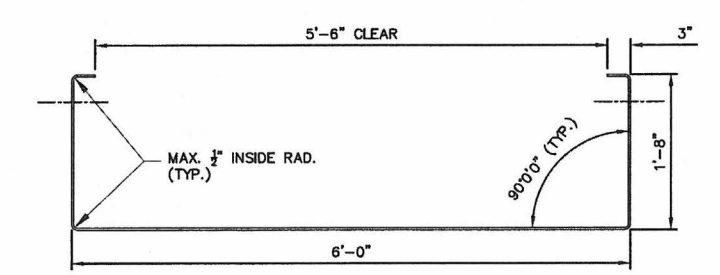
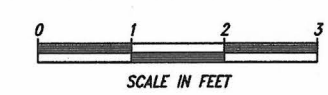


SHELL END PANEL INSET AND FLUSH WITH END OF SHELL

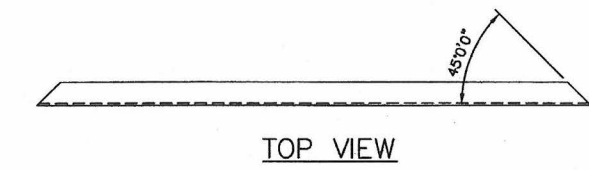


3 PILE POCKET
 NTS

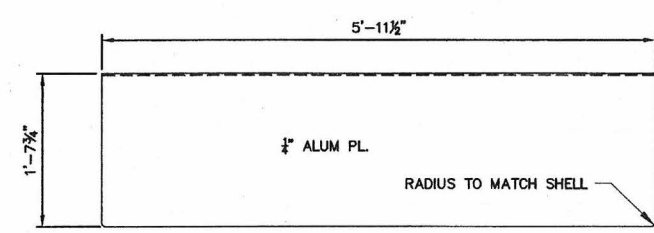
1 SHELL DETAILS (TYPE "B" DOCK)
 1" = 1'-0"



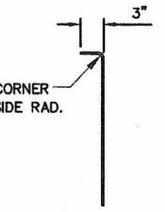
SECTION-A



TOP VIEW



END VIEW



SIDE VIEW

2 SHELL END PANEL
 1" = 1'-0"



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CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT PUBLIC WORKS

PROJECT: MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

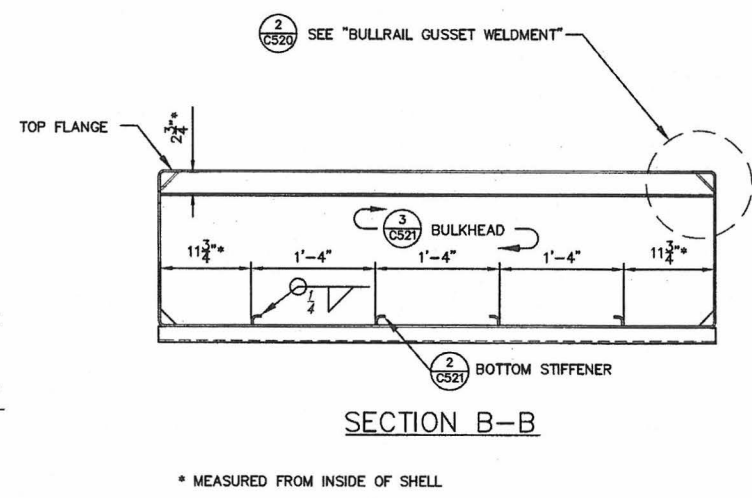
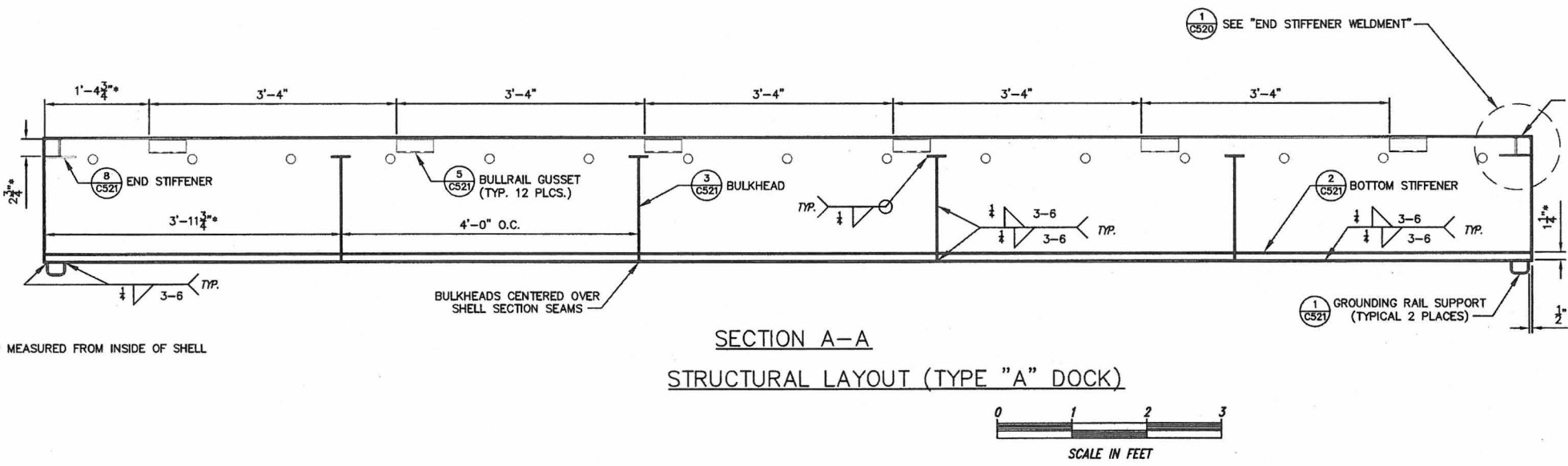
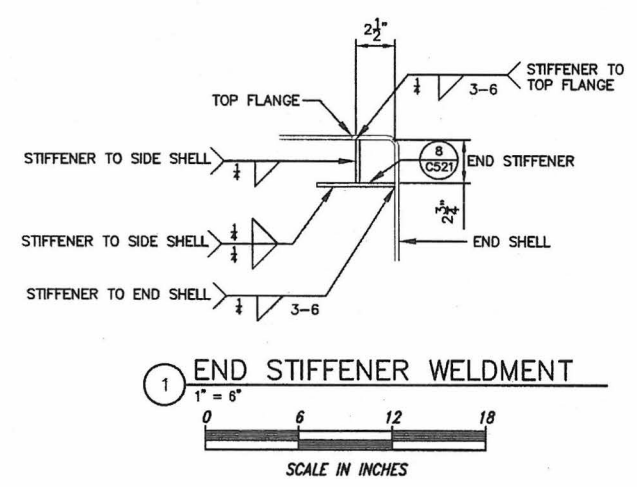
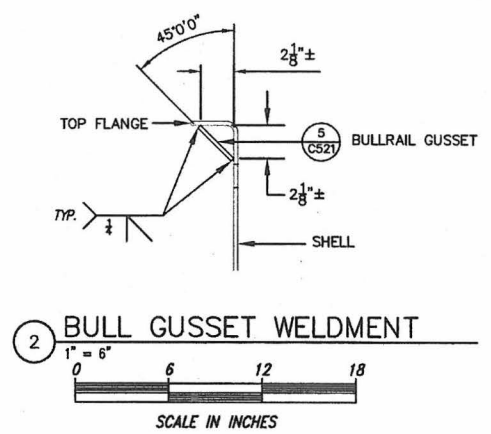
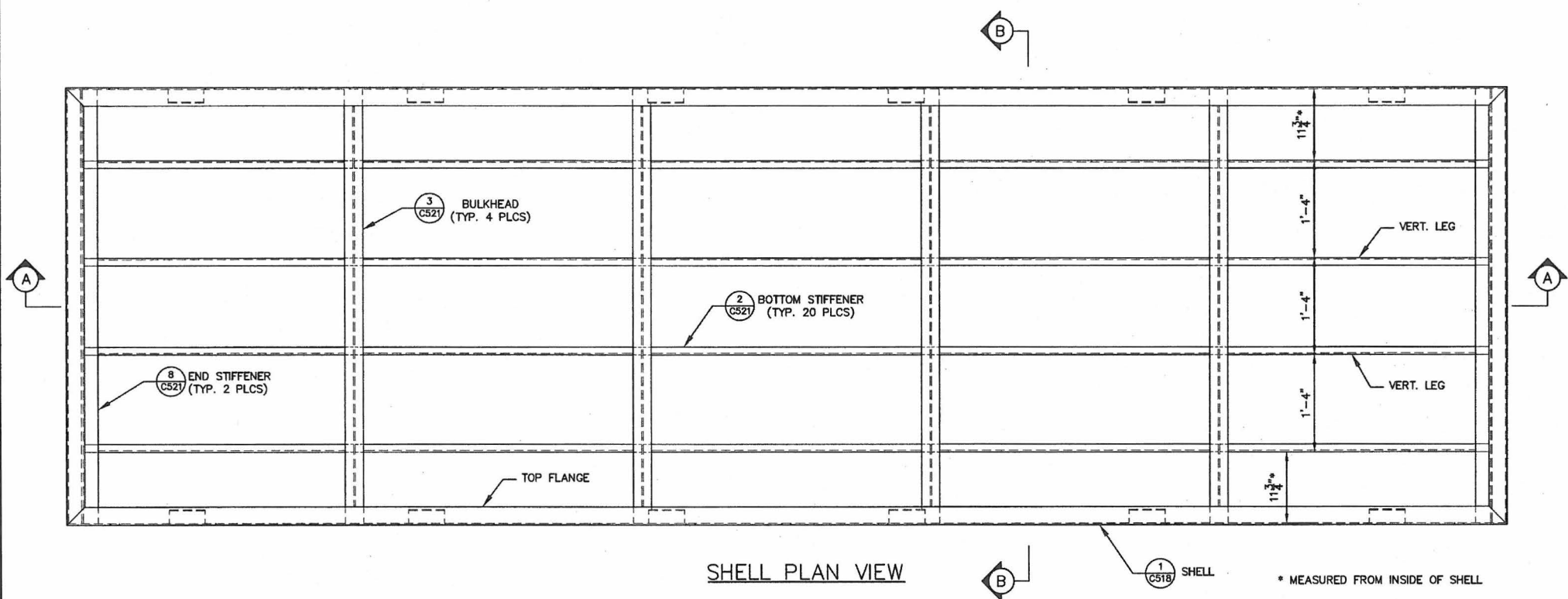
SHEET TITLE: CIVIL SITE DETAILS
 MARINE DETAILS

NO.	DATE	REVISION	BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

C519

JOB NO. MAEX0000-0021



NOTES:
 1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

Drawing File: \\P:\p\project\MAEX\0000\0021\0400\CAO\SHEETS\C513-MAE21-MARIN_DTL.DWG Date/Time: Mar 26, 2014 4:22pm User: adh



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Portland OR 97201
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Fax: 503.223.2701

CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
		PUBLIC WORKS

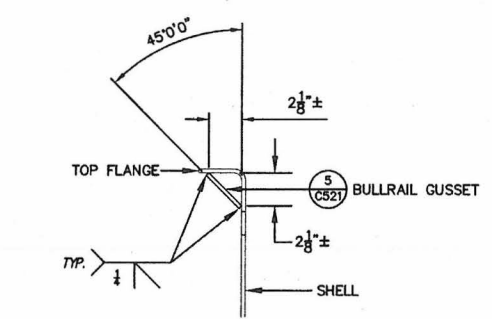
PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: CIVIL SITE DETAILS
MARINE DETAILS

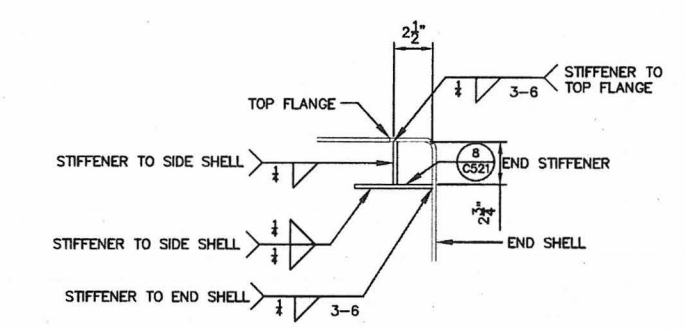
NO.	DATE	REVISION BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

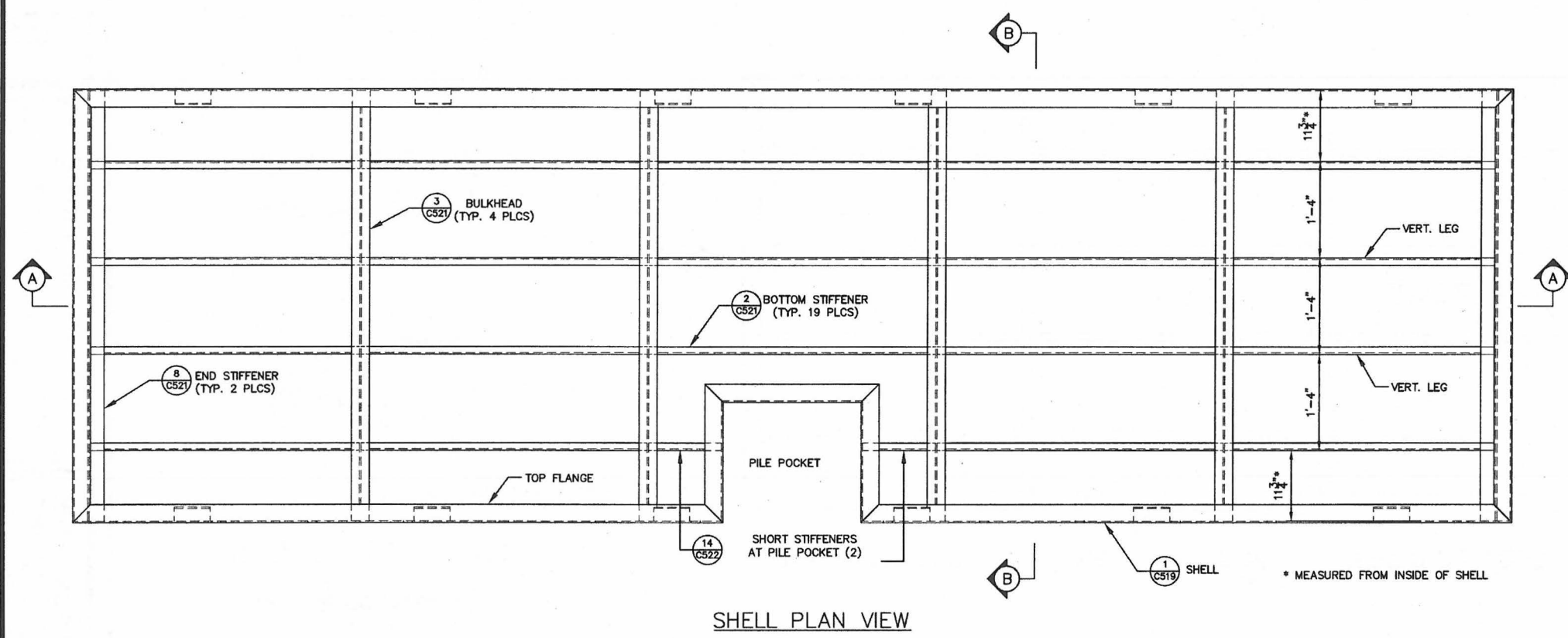
C520
JOB NO. MAEX0000-0021



2 BULL GUSSET WELDMENT
1" = 6"
SCALE IN INCHES

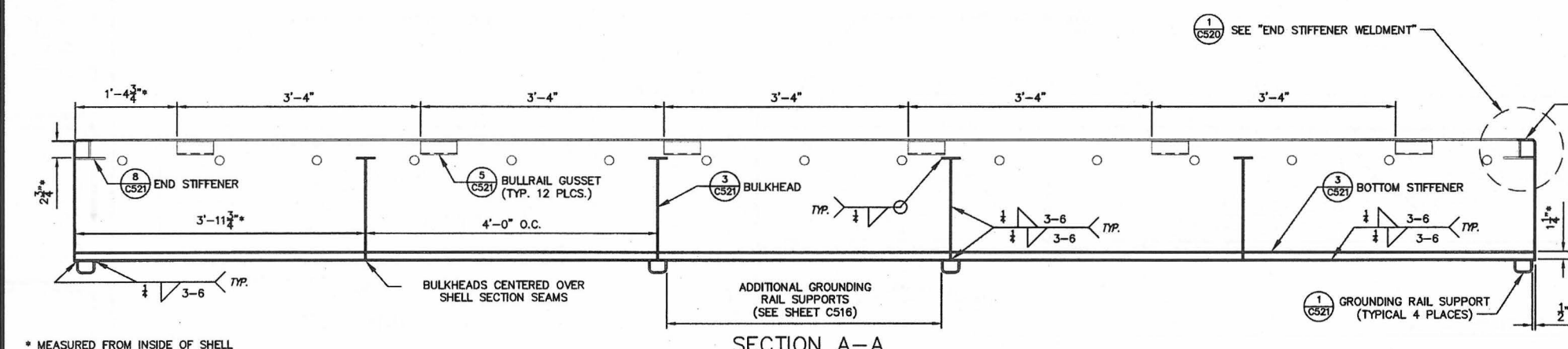


1 END STIFFENER WELDMENT
1" = 6"
SCALE IN INCHES

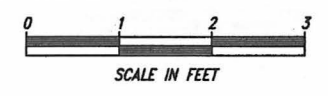


SHELL PLAN VIEW

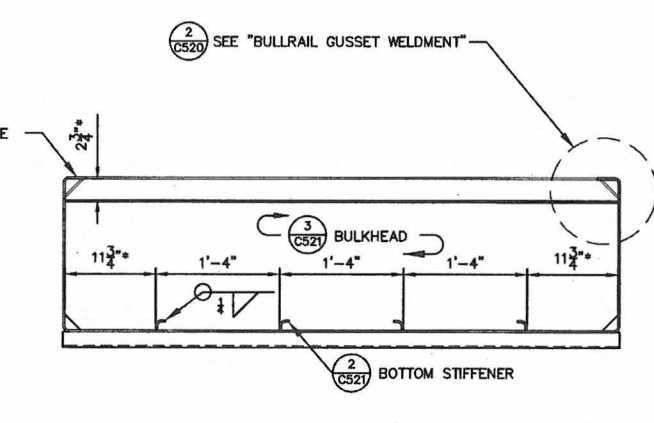
* MEASURED FROM INSIDE OF SHELL



SECTION A-A
STRUCTURAL LAYOUT (TYPE "B" DOCK)



* MEASURED FROM INSIDE OF SHELL



SECTION B-B

* MEASURED FROM INSIDE OF SHELL

- NOTES:
1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

Date/Time: Mar 26, 2014 - 4:24pm User: sdh



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 Fax: 503.223.2701

CITY OF MILWAUKIE

DEPARTMENT	SIGNATURE	APPROVAL DATE
CITY/LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT: MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

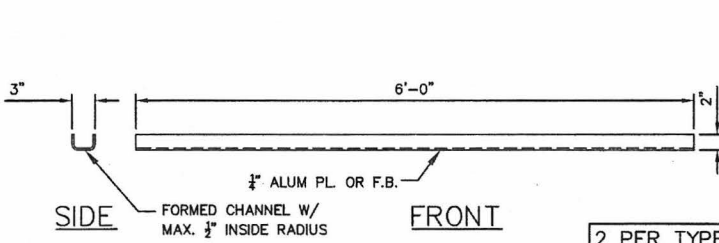
**CIVIL SITE DETAILS
 MARINE DETAILS**

NO.	DATE	REVISION

SCALE: AS SHOWN
 DATE: 4-1-2014
 DRN: BAR
 CK: SDH

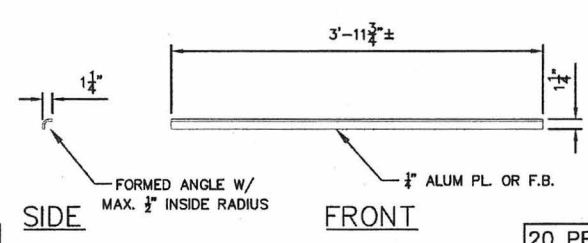
C521

JOB NO. MAEX0000-0021



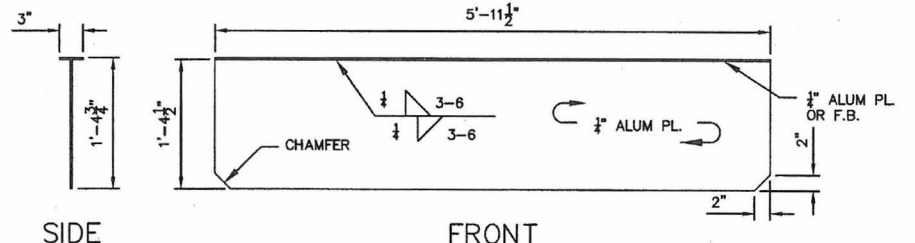
① GROUNDING RAIL SUPPORT
 1"=1'-0"

2 PER TYPE "A" DOCK
 4 PER TYPE "B" DOCK



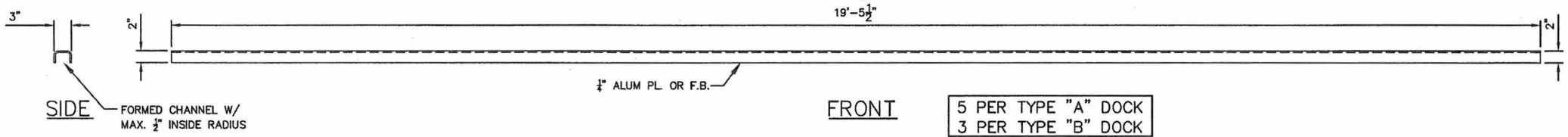
② BOTTOM STIFFENER
 1"=1'-0"

20 PER TYPE "A" DOCK
 19 PER TYPE "B" DOCK



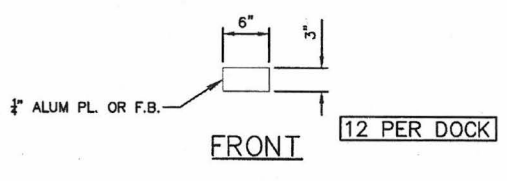
③ BULKHEAD
 1"=1'-0"

4 PER DOCK



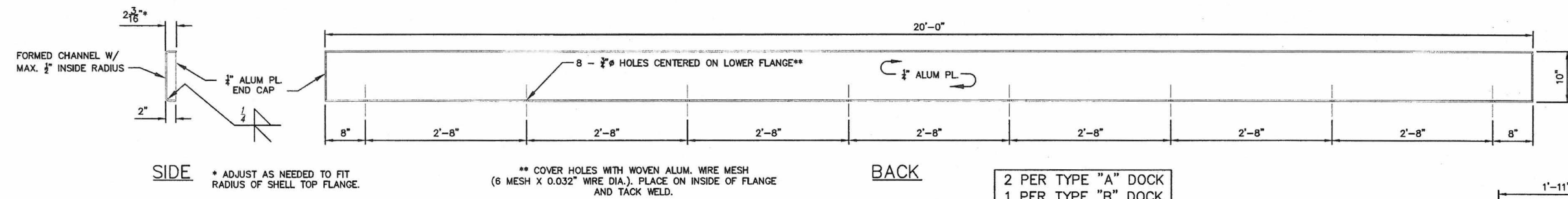
④ DECK SUPPORT
 1"=1'-0"

5 PER TYPE "A" DOCK
 3 PER TYPE "B" DOCK



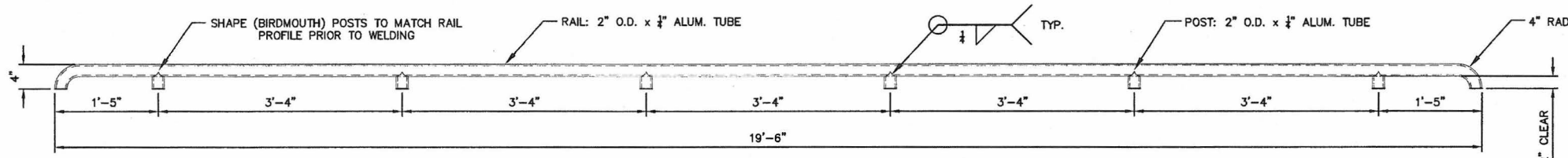
⑤ BULLRAIL GUSSET
 1"=1'-0"

12 PER DOCK



⑥ WHALER SUPPORT
 1"=1'-0"

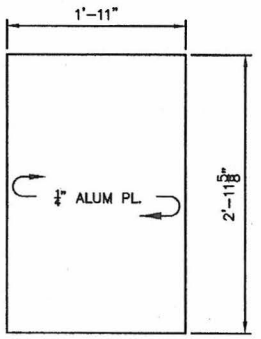
2 PER TYPE "A" DOCK
 1 PER TYPE "B" DOCK



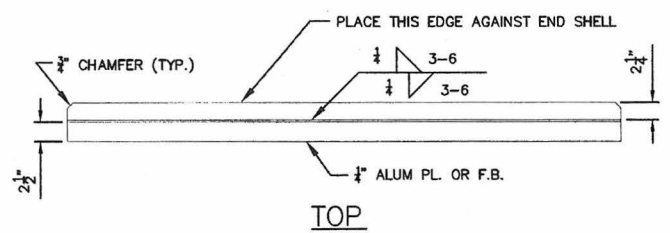
⑦ BULLRAIL
 1"=1'-0"

2 PER TYPE "A" DOCK
 1 PER TYPE "B" DOCK

20 PER TYPE "A" DOCK
 18 PER TYPE "B" DOCK

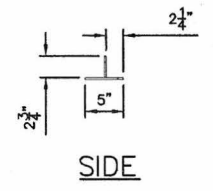


⑩ TOP COVER
 1"=1'-0"



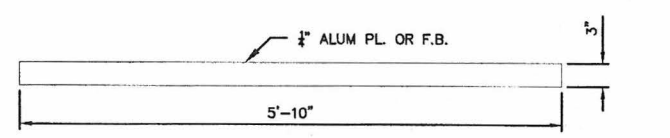
⑧ END STIFFENER
 1"=1'-0"

2 PER DOCK



⑨ ANODE BRACKET
 1"=1'-0"

2 PER DOCK



⑪ TOP COVER SPACER
 1"=1'-0"

4 PER TYPE "A" DOCK
 3 PER TYPE "B" DOCK

**STRUCTURAL DETAILS
 (TYPE "A" & "B" DOCKS)**



NOTES:
 1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

Drawing File: \\P:\Projects\Project\MAEX00000021\040000\Drawings\C521-MAEX01-MARBN-DTLSDWG Date/Time: Mar 26, 2014 - 4:25pm User: sgh



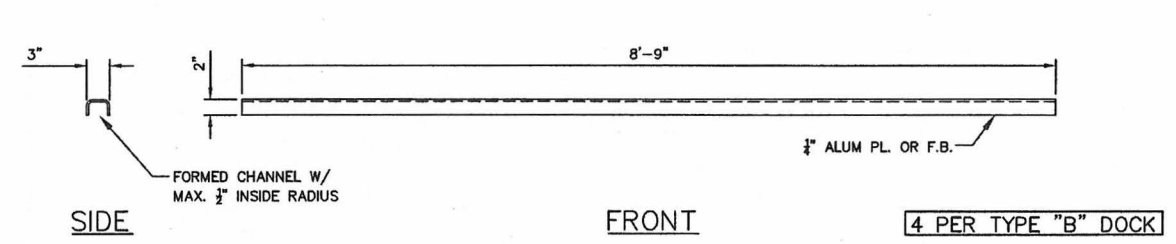
2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

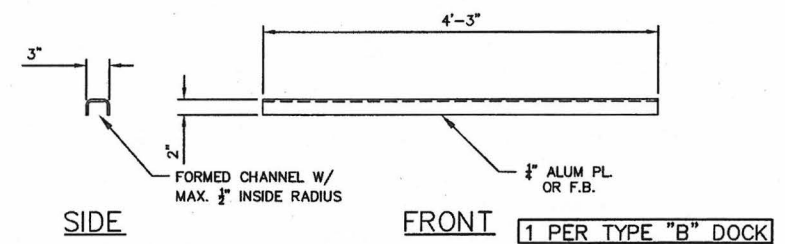
PROJECT
**MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY**
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
**CIVIL SITE DETAILS
 MARINE DETAILS**

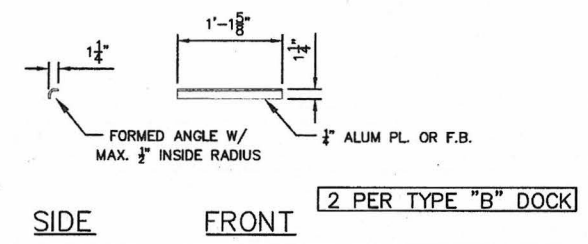
DATE/TIME: Mar 26, 2014 - 4:26pm User: sdh



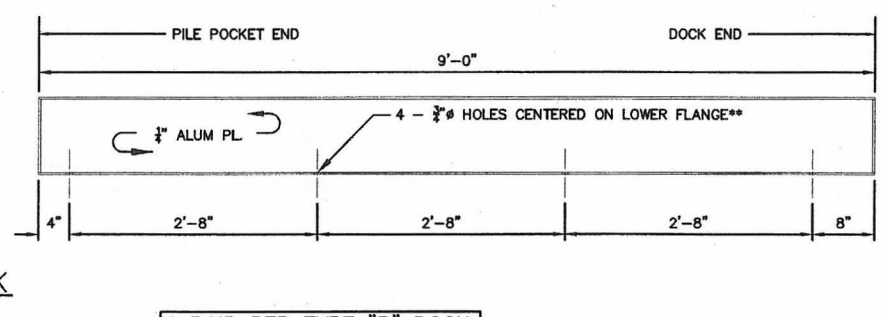
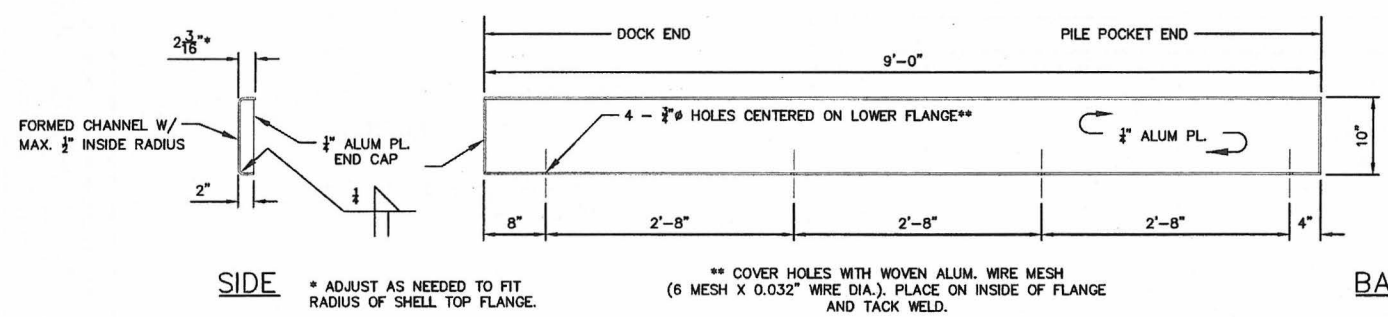
12 DECK SUPPORT @ PILE POCKET
 1"=1'-0"
 4 PER TYPE "B" DOCK



13 DECK SUPPORT CONNECTOR
 1"=1'-0"
 1 PER TYPE "B" DOCK

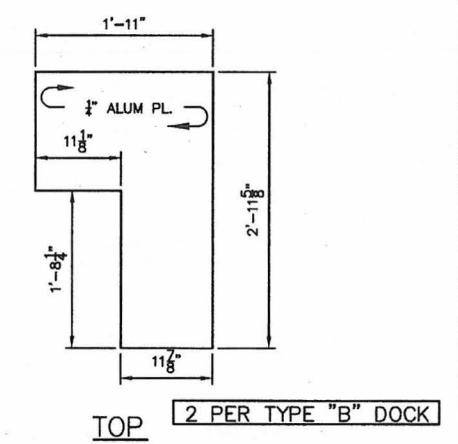


14 BOTTOM STIFFNER @ PILE POCKET
 1"=1'-0"
 2 PER TYPE "B" DOCK

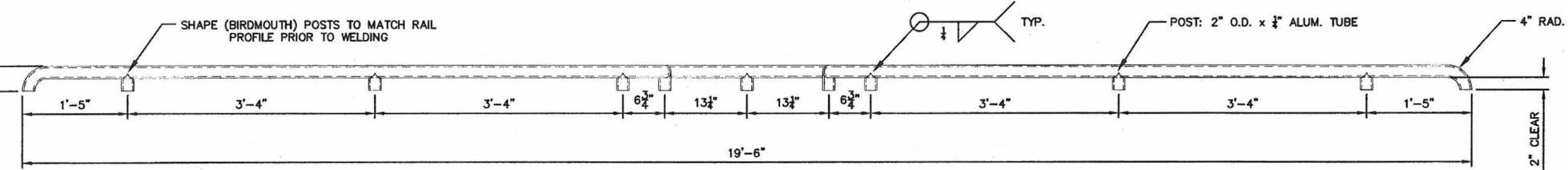
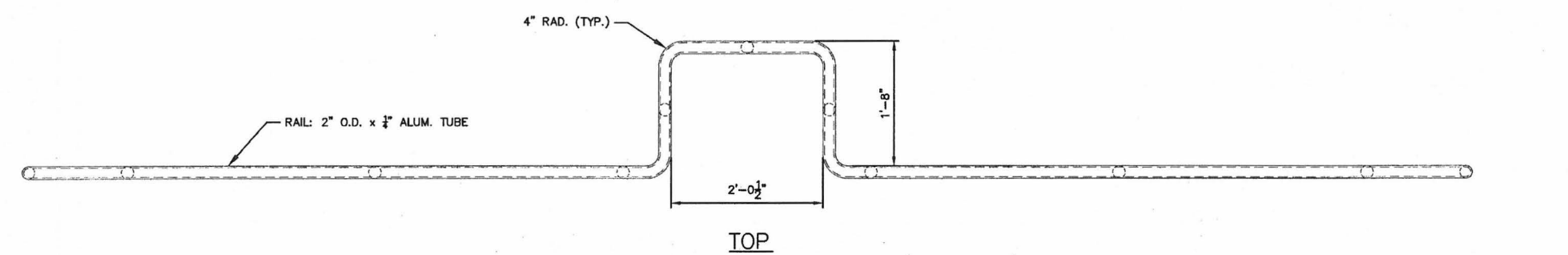


15 WALER SUPPORT @ PILE POCKET
 1"=1'-0"
 1 PAIR PER TYPE "B" DOCK

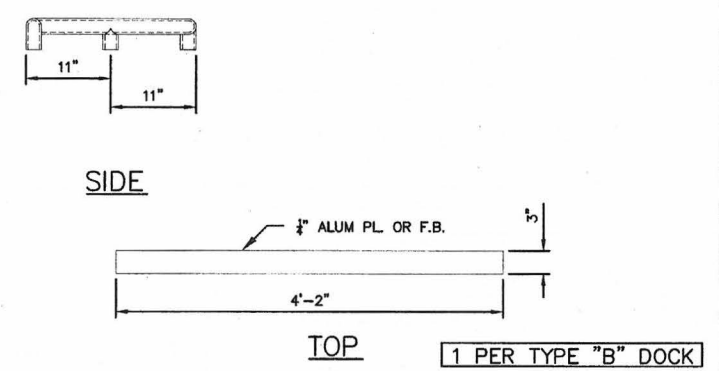
* ADJUST AS NEEDED TO FIT RADIUS OF SHELL TOP FLANGE.
 ** COVER HOLES WITH WOVEN ALUM. WIRE MESH (6 MESH X 0.032" WIRE DIA.). PLACE ON INSIDE OF FLANGE AND TACK WELD.



17 TOP COVER @ PILE POCKET
 1"=1'-0"
 2 PER TYPE "B" DOCK

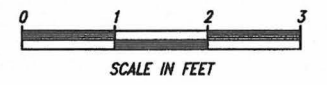


16 BULLRAIL @ PILE POCKET
 1"=1'-0"
 1 PER TYPE "B" DOCK



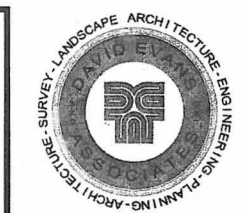
18 TOP COVER SPACER @ PILE POCKET
 1"=1'-0"
 1 PER TYPE "B" DOCK

STRUCTURAL DETAILS
 (TYPE "B" DOCK ONLY)



NOTES:
 1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

C522
 JOB NO. MAEX0000-0021



2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
		PUBLIC WORKS

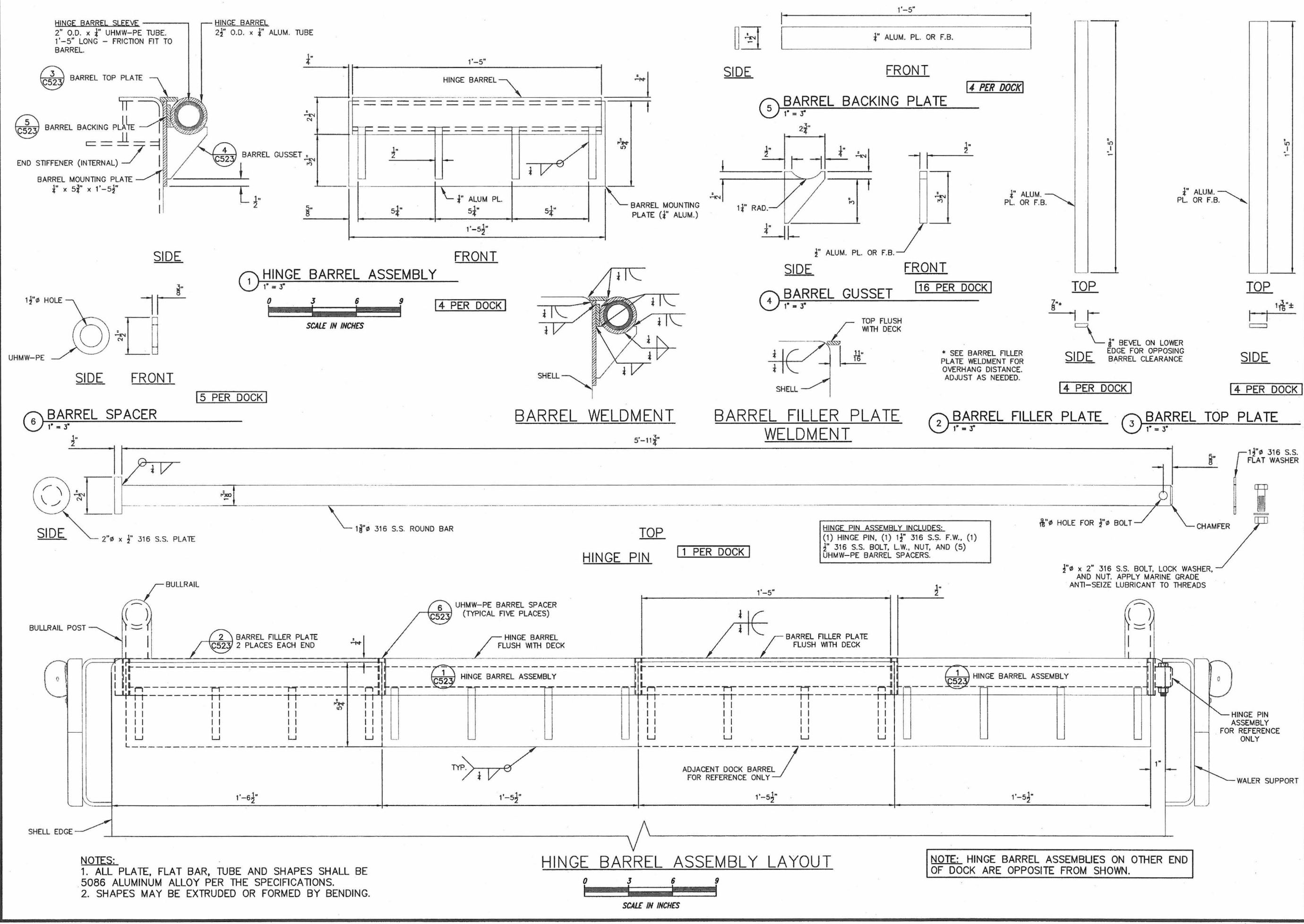
PROJECT: MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: CIVIL SITE DETAILS
 MARINE DETAILS

NO.	DATE	REVISION

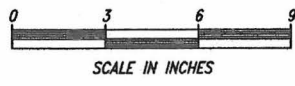
SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

C523
 JOB NO. MAEX0000-0021



NOTES:
 1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

NOTE: HINGE BARREL ASSEMBLIES ON OTHER END OF DOCK ARE OPPOSITE FROM SHOWN.





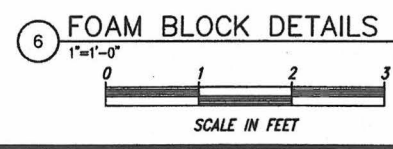
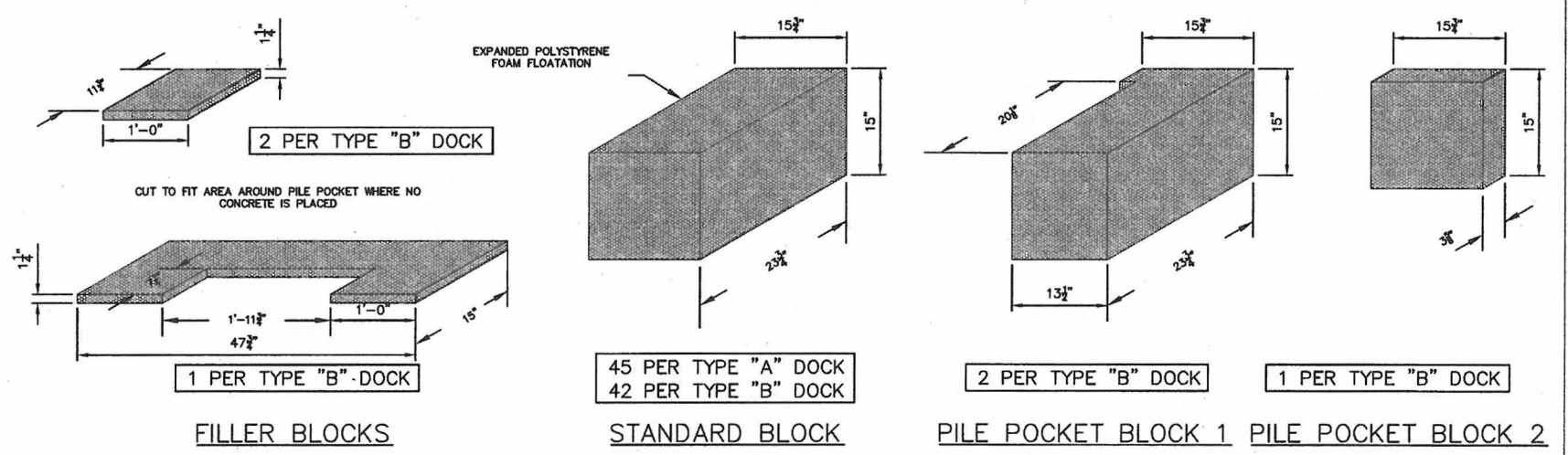
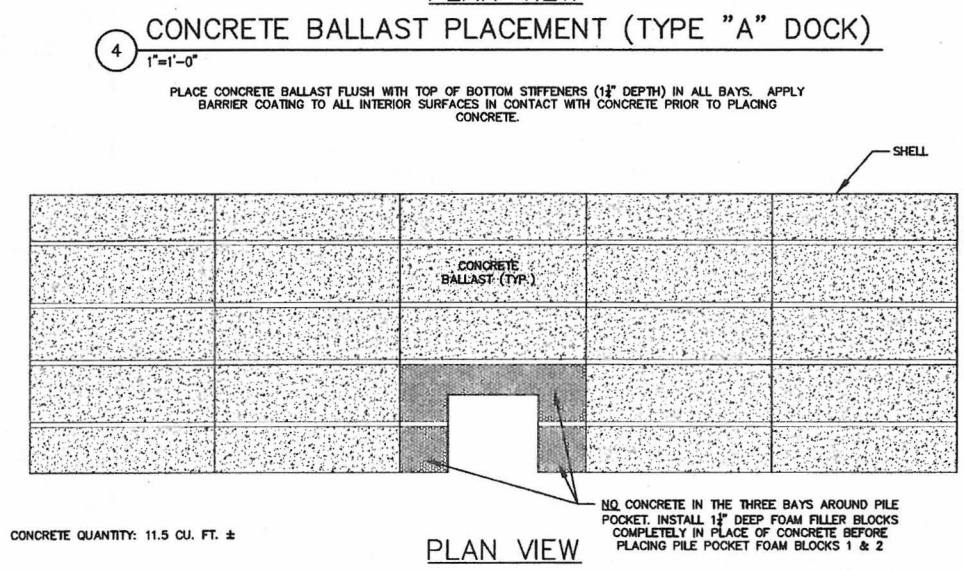
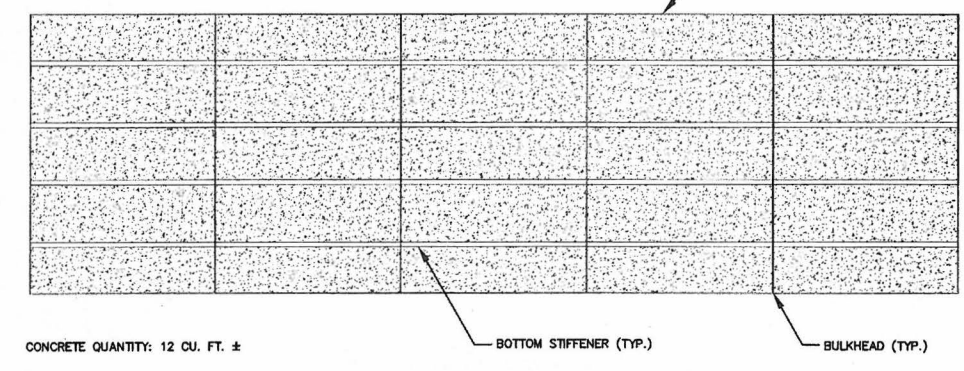
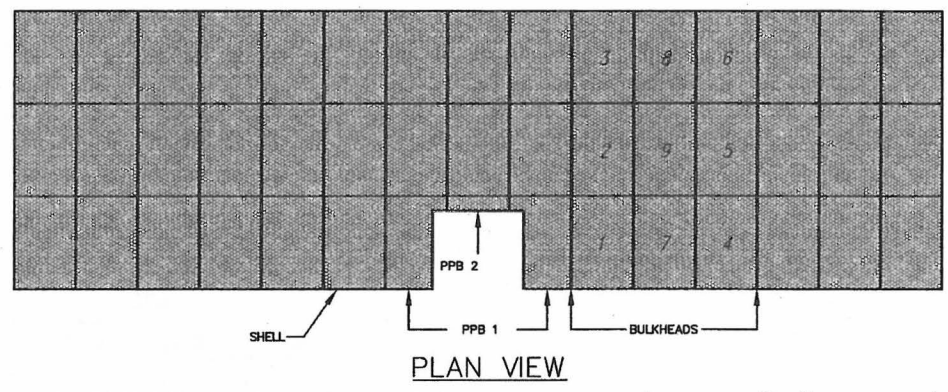
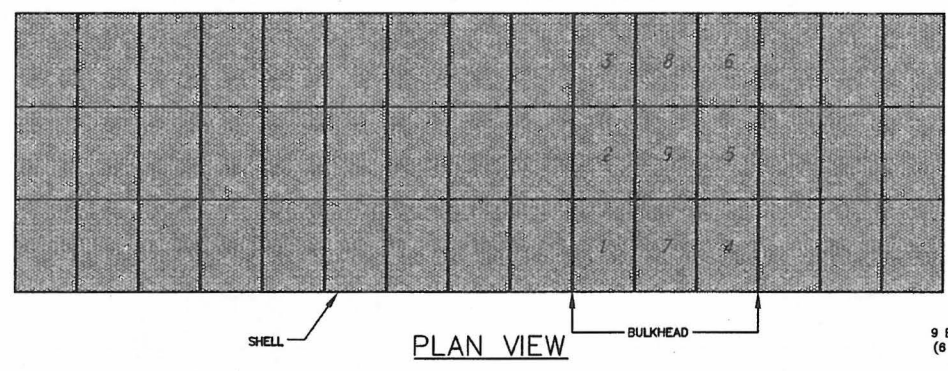
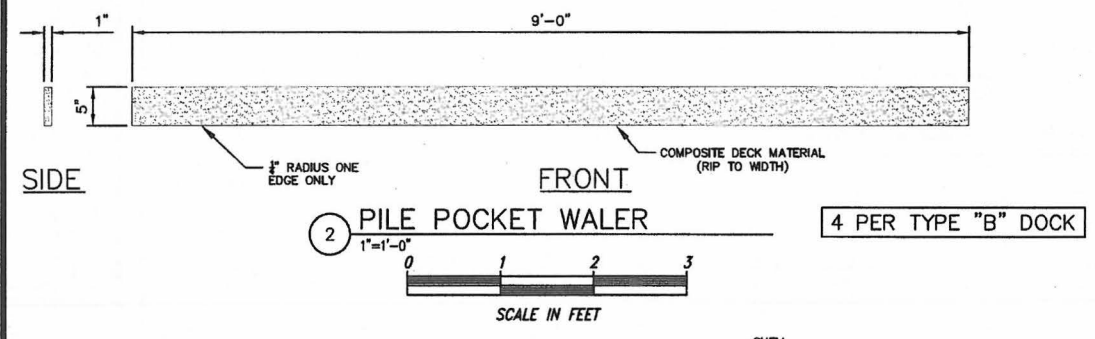
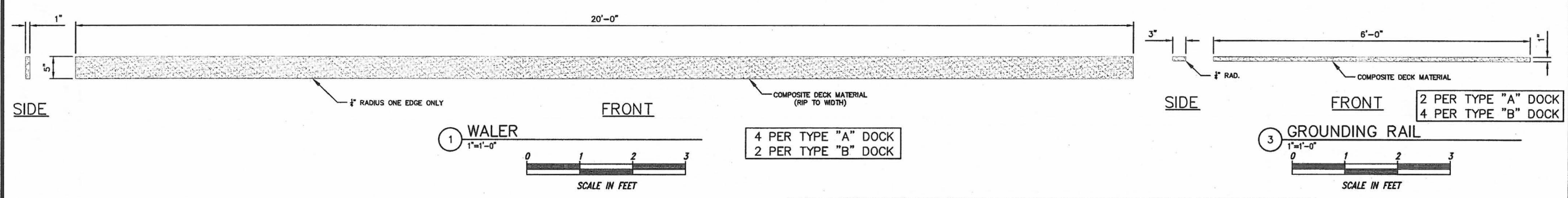
2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE		APPROVAL DATE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	SIGNATURE	
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
CIVIL SITE DETAILS
MARINE DETAILS

DATE/Time: Mar 26, 2014 - 4:28pm User: sgh



BY	REVISION	
NO.	DATE	
DRN.	BAR	
CK.	SDH	

SCALE: AS SHOWN
 DATE: 4-1-2014
 JOB NO. MAEX0000-0021



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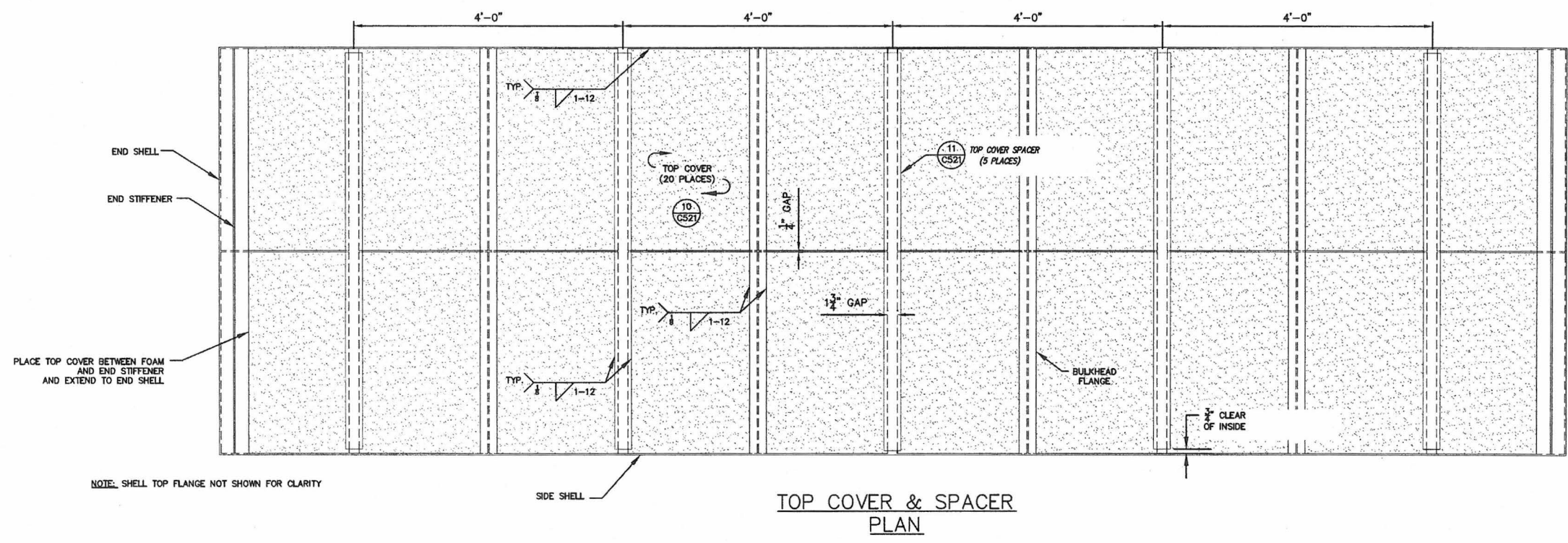
CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS MARINE DETAILS

NO.	DATE	REVISION	BY

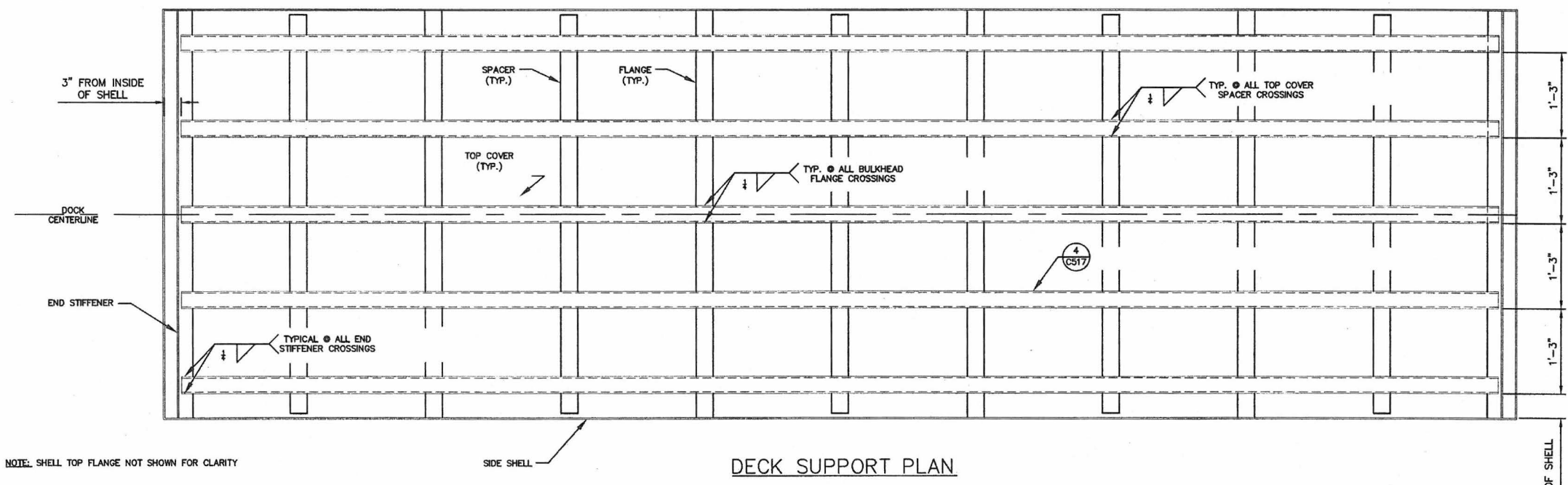
SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

C525
JOB NO. MAEX0000-0021



PLACE TOP COVERS ON FOAM WITH ONE EDGE UNDER BULKHEAD FLANGE AND AGAINST BULKHEAD. SLIDE ADJACENT EDGE AGAINST SIDE SHELL. TACK WELD AS SHOWN TAKING CARE TO AVOID/MINIMIZE MELTING OF FOAM. SIDE GAP BETWEEN COVERS WILL BE 1/8" AND END GAP WILL BE 1/8".

CENTER TOP COVER SPACERS OVER SIDE GAP BETWEEN TOP COVERS WITH 1/8" CLEAR FROM SIDE SHELL. TACK WELD AS SHOWN TAKING CARE TO AVOID/MINIMIZE MELTING OF FOAM.

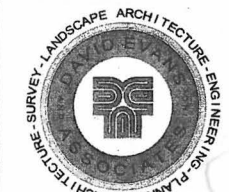


- NOTES:
1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
 2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

TOPSIDE LAYOUT (TYPE "A" DOCK)



Drawing File: \\P:\data\Project\MAEX00000021\040000\PROJECTS\C513-MAEX31-MARIN-DTLA.DWG Date/Time: Mar 26, 2014 - 4:29pm User: swh



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CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT
**MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY**
S.E. HARRISON STREET - KELLOGG CREEK

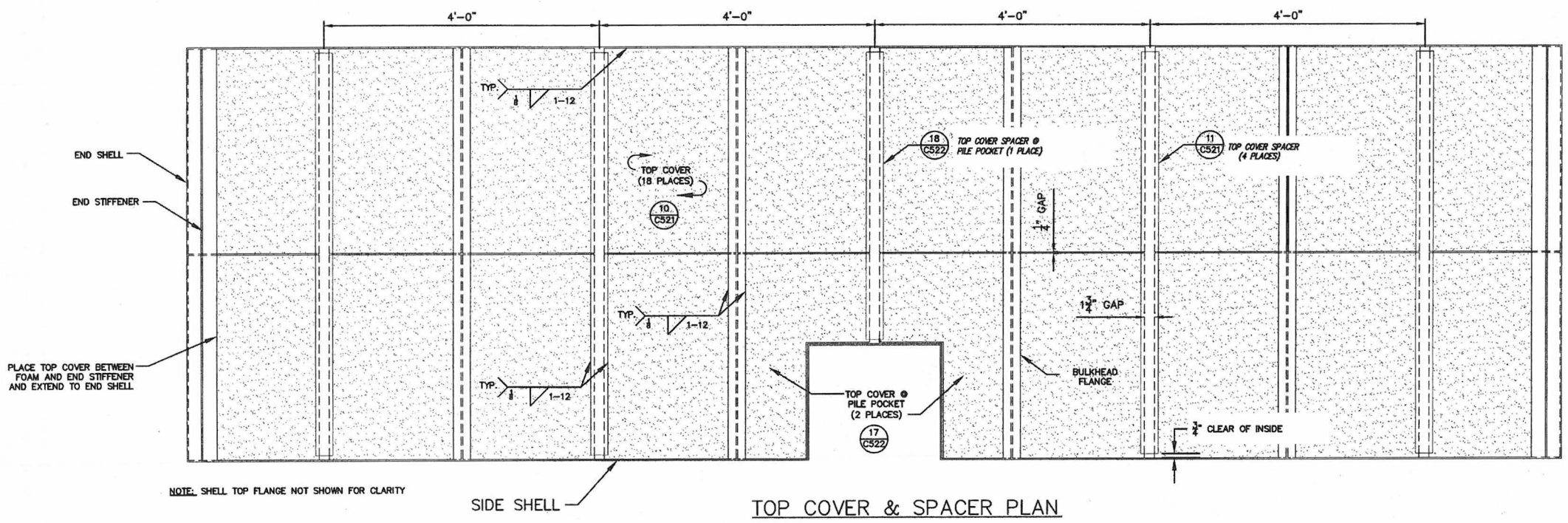
SHEET TITLE
**CIVIL SITE DETAILS
MARINE DETAILS**

NO.	DATE	REVISION BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

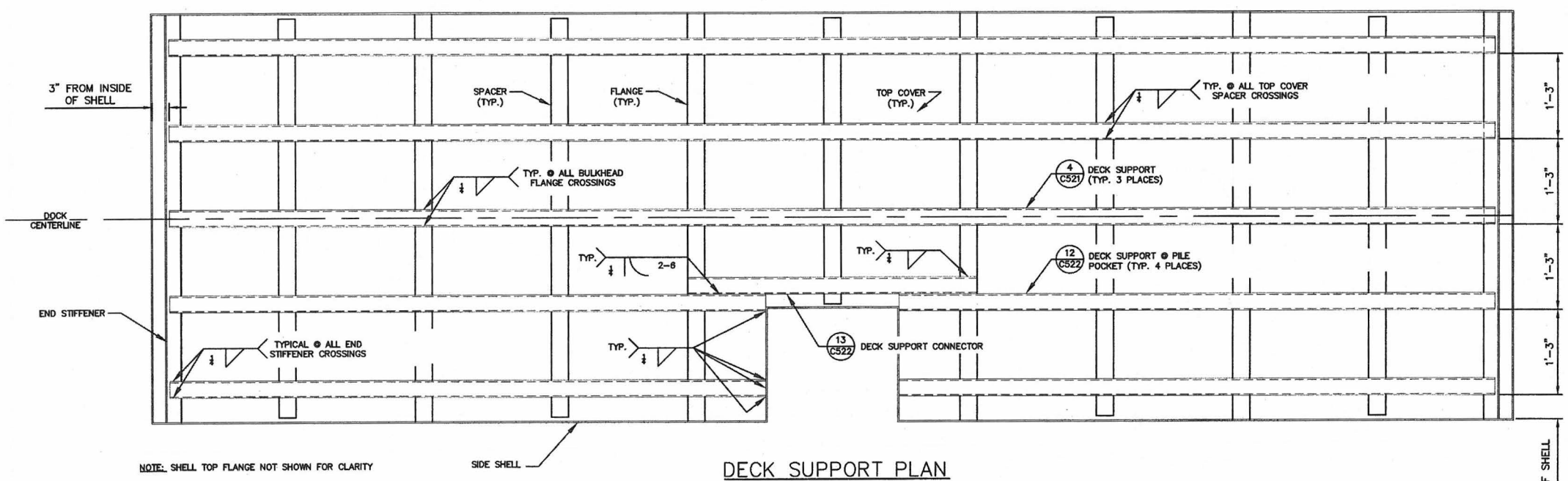
C526

JOB NO. MAEX0000-0021



PLACE TOP COVERS ON FOAM WITH ONE EDGE UNDER BULKHEAD FLANGE AND AGAINST BULKHEAD. SLIDE ADJACENT EDGE AGAINST SIDE SHELL. TACK WELD AS SHOWN TAKING CARE TO AVOID/MINIMIZE MELTING OF FOAM. SIDE GAP BETWEEN COVERS WILL BE 1/4" AND END GAP WILL BE 1/4".

CENTER TOP COVER SPACERS OVER SIDE GAP BETWEEN TOP COVERS WITH 1/4" CLEAR FROM SIDE SHELL. TACK WELD AS SHOWN TAKING CARE TO AVOID/MINIMIZE MELTING OF FOAM.



NOTES:
1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

TOPSIDE LAYOUT (TYPE "B" DOCK)



Drawing File: \\P001s1\MAEX00000021\CAD\CAD\SHETS\C513-MAE21-MARV DTL.DWG Date/Time: Mar 26, 2014 - 4:32pm User: sgh



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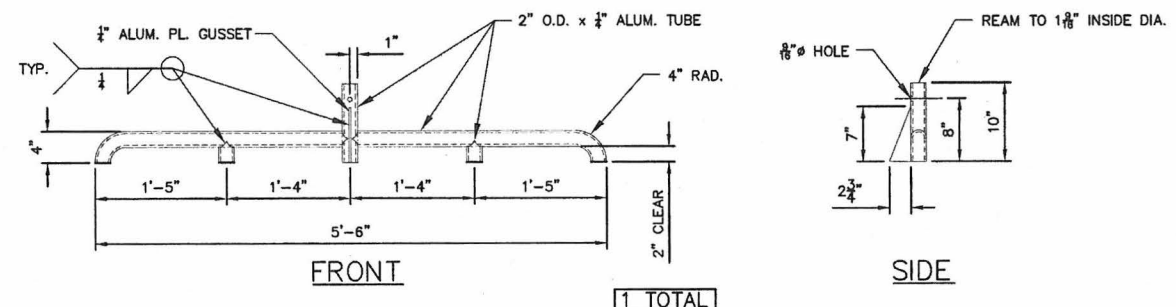
CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	SIGNATURE	APPROVAL DATE
DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
		PUBLIC WORKS

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS MARINE DETAILS

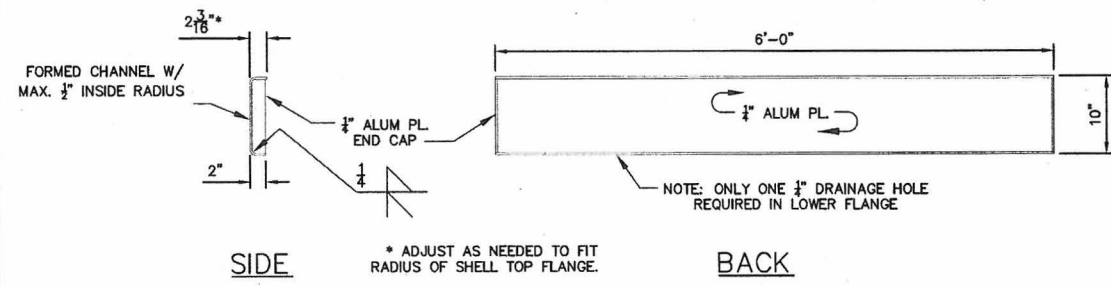
NO.	DATE	REVISION

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.:	BAR
CK.:	SDH

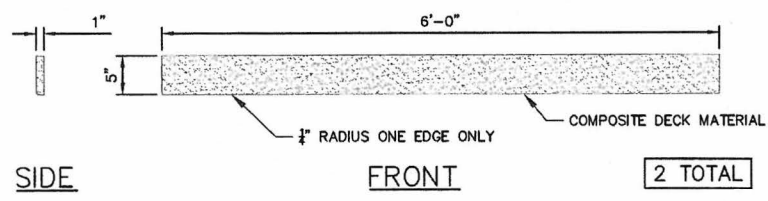
C527
JOB NO. MAEX000-0021



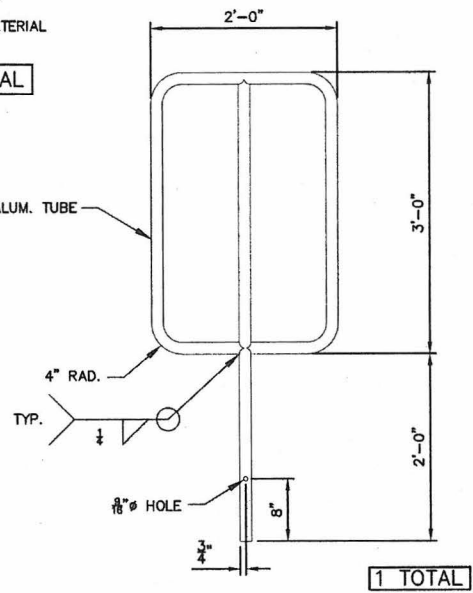
2
1"=1'-0"
END BULL RAIL
(LAST DOCK ONLY)
1 TOTAL



1
1"=1'-0"
END WALER SUPPORT
(LAST DOCK ONLY)
1 TOTAL

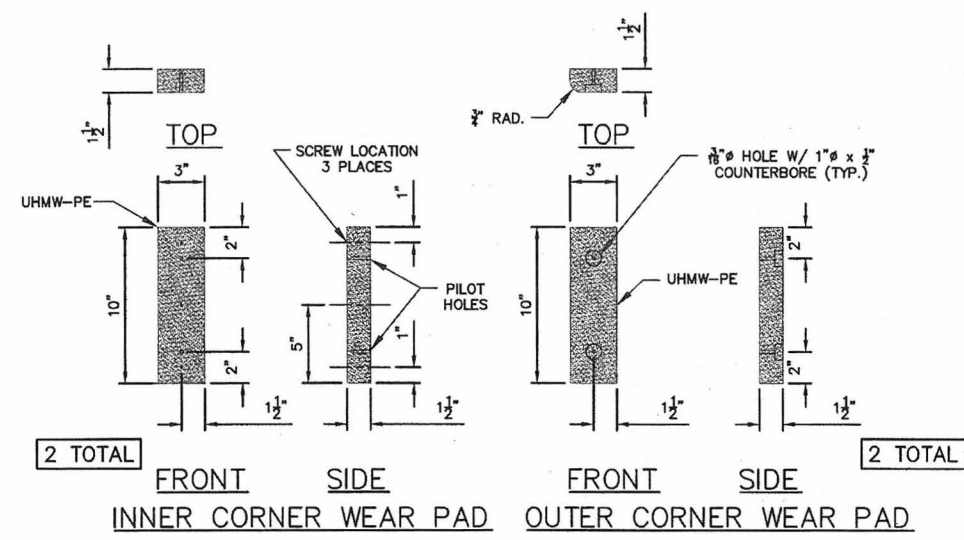


3
1"=1'-0"
END WALER
(LAST DOCK ONLY)
2 TOTAL

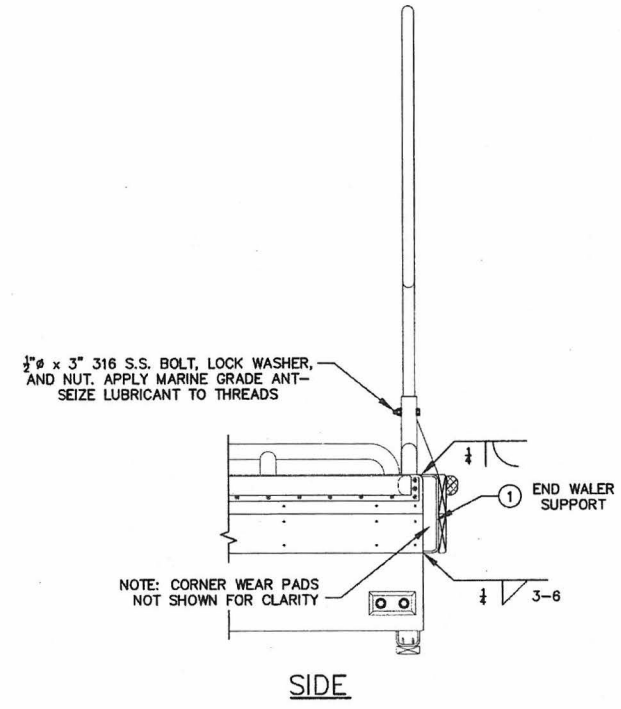
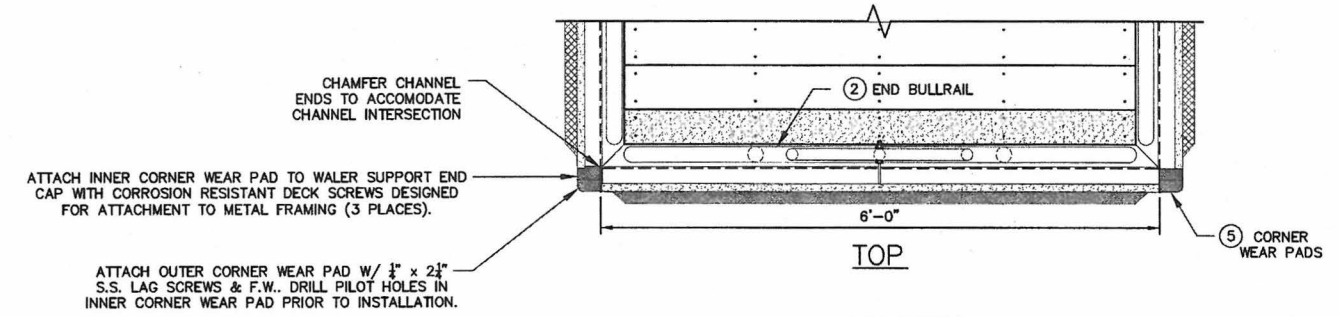


4
1"=1'-0"
SIGN POST
(LAST DOCK ONLY)
1 TOTAL

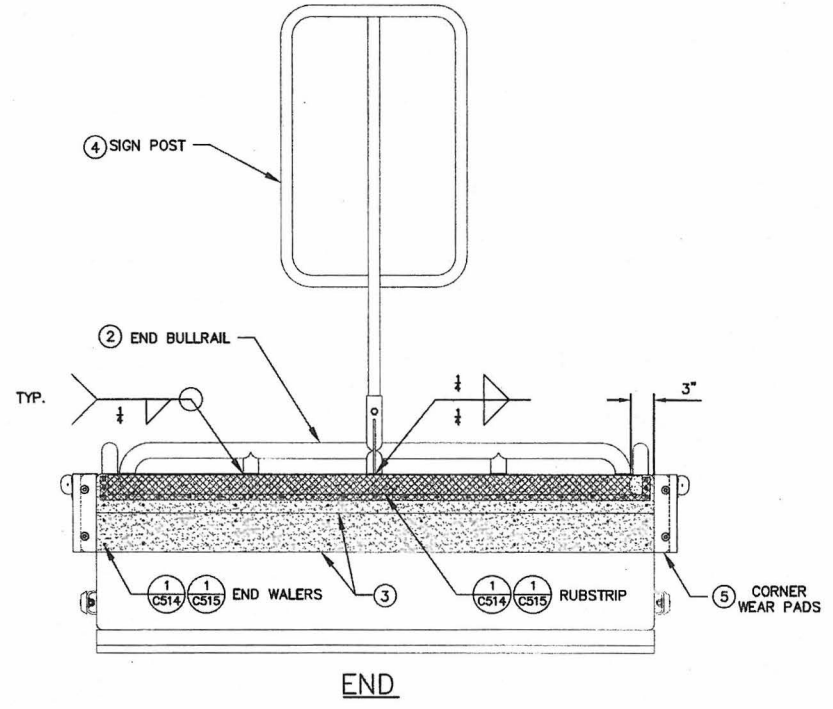
LAST DOCK DETAILS
SCALE IN FEET



5
1"=6"
CORNER WEAR PADS
SCALE IN INCHES



SIDE



END
OFF-SHORE END
(LAST DOCK ONLY)

NOTES:
1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.

Drawing File: \\Pdris1\Project\MAEX\00000021\0-000000\00021-SHEETS\C513-MEX21-MRN DTL.DWG Date/Time: Mar 26, 2014 - 4:33pm User: edh



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CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	DEPARTMENT	CITY LANDSCAPE ARCHITECT
MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY	ARCHITECT	COMMUNITY DEVELOPMENT
	S.E. HARRISON STREET - KELLOGG CREEK	PUBLIC WORKS

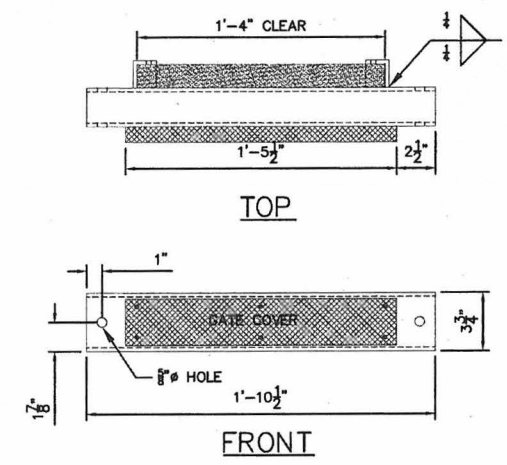
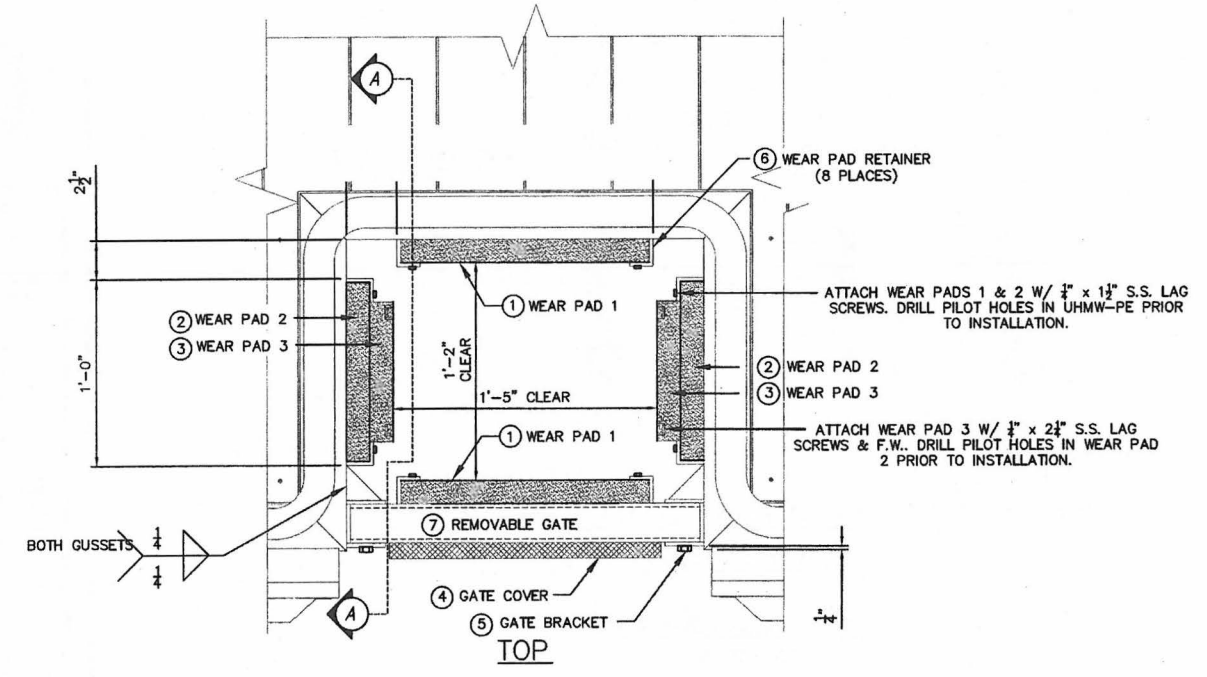
PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK
 SHEET TITLE: CIVIL SITE DETAILS
 MARINE DETAILS

NO.	DATE	REVISION	BY

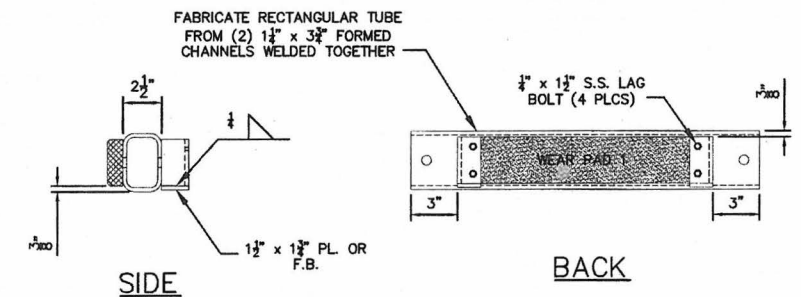
SCALE: AS SHOWN
DATE: 4-1-2014
DRN. BAR
CK. SDH

C528
 JOB NO. MAEX0000-0021

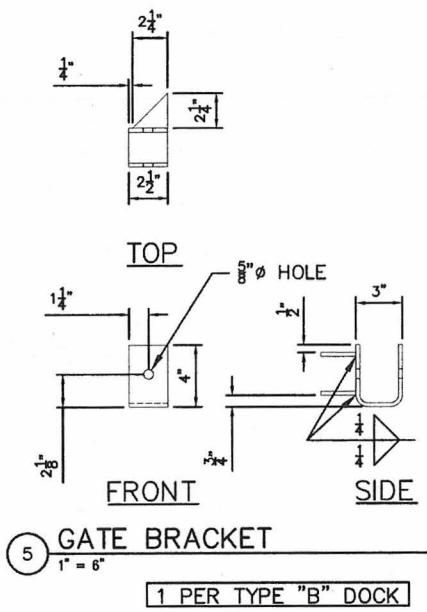
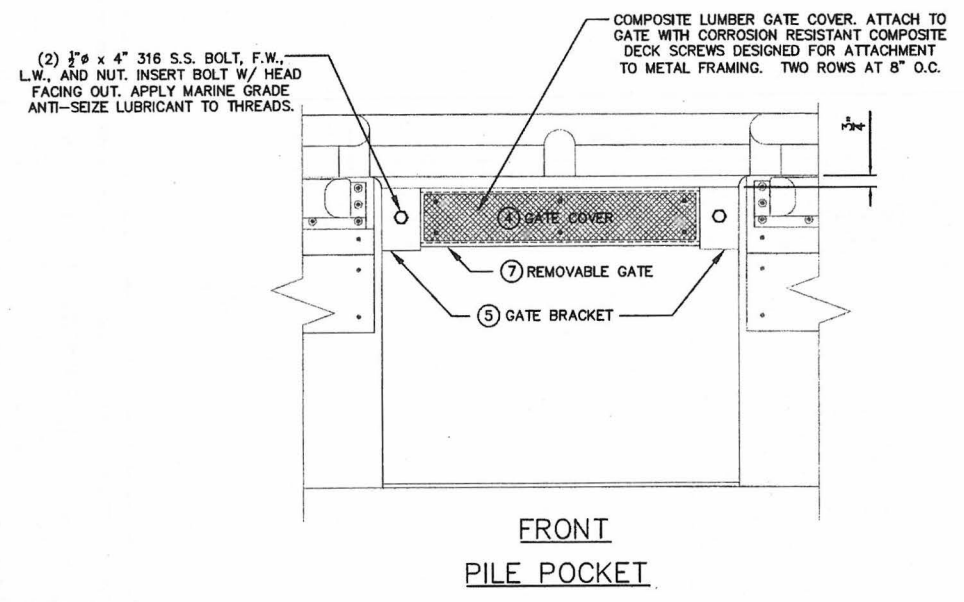
NOTE: ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.



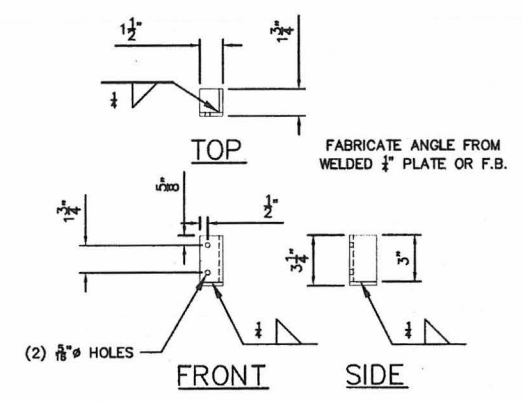
NOTE: FILE/SAND OUTSIDE FACES AS NEEDED TO PROVIDE SLIP FIT TO GATE BRACKET



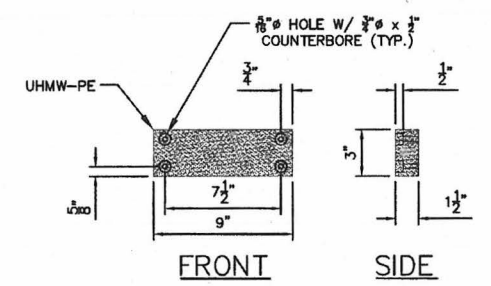
7 REMOVABLE GATE
 1" = 6"
 1 PER TYPE "B" DOCK



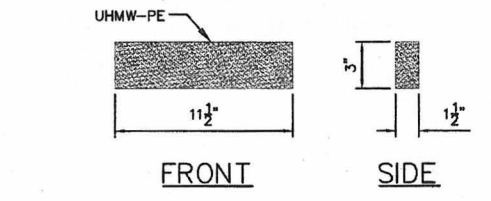
5 GATE BRACKET
 1" = 6"
 1 PER TYPE "B" DOCK



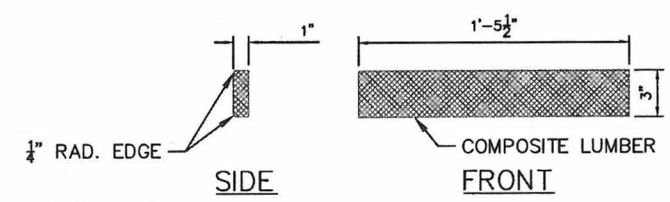
6 WEAR PAD RETAINER
 1" = 6"
 8 PER TYPE "B" DOCK



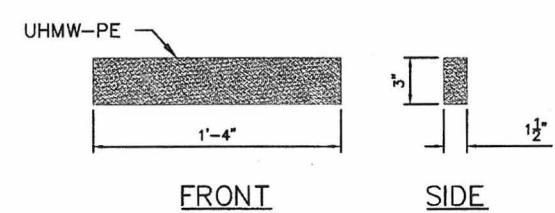
3 WALER PAD 3
 1" = 6"
 2 PER TYPE "B" DOCK



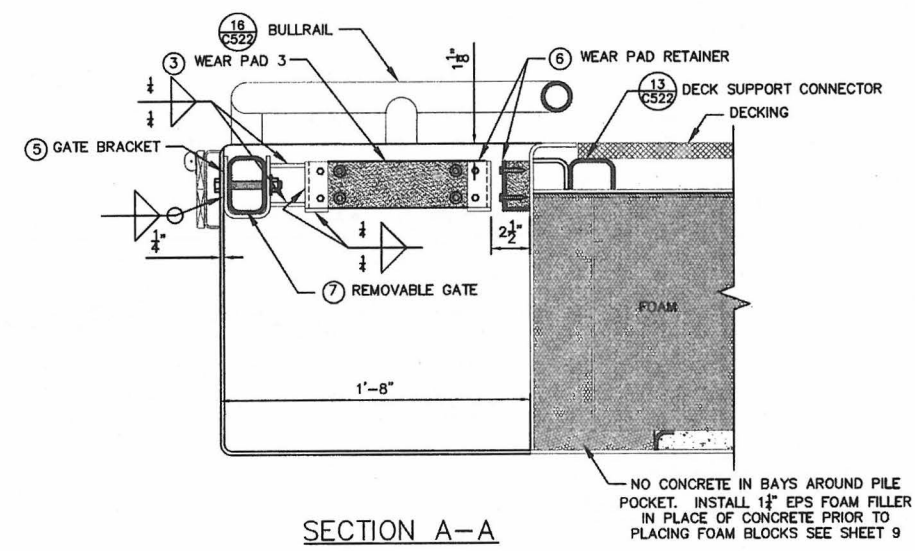
2 WALER PAD 2
 1" = 6"
 2 PER TYPE "B" DOCK



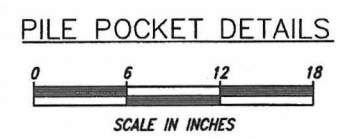
4 GATE COVER
 1" = 6"
 1 PER TYPE "B" DOCK



1 WALER PAD 1
 1" = 6"
 2 PER TYPE "B" DOCK



NO CONCRETE IN BAYS AROUND PILE POCKET. INSTALL 1 1/2" EPS FOAM FILLER IN PLACE OF CONCRETE PRIOR TO PLACING FOAM BLOCKS SEE SHEET 9





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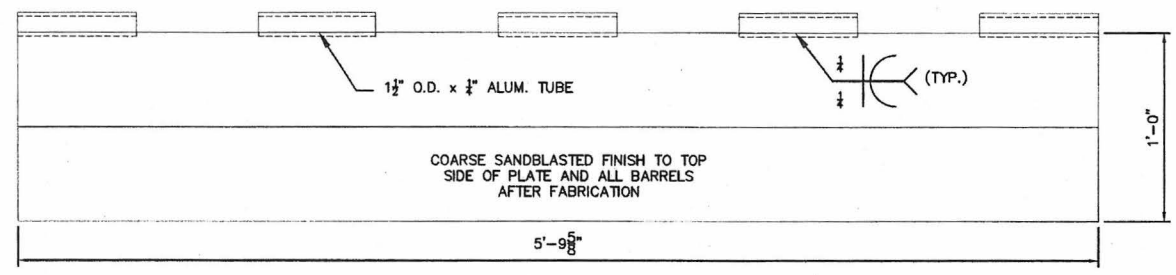
CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT PUBLIC WORKS

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	CIVIL SITE DETAILS MARINE DETAILS

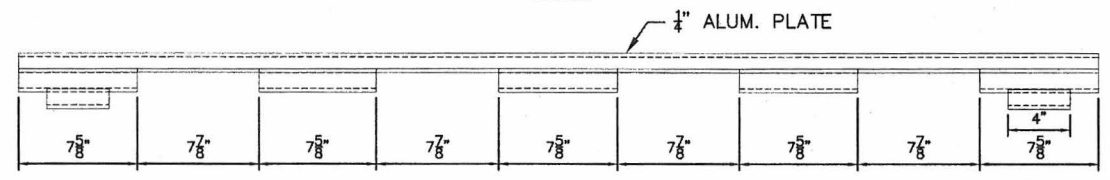
NO.	DATE	REVISION	BY

SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	SDH

C529
JOB NO. MAEX0000-0021

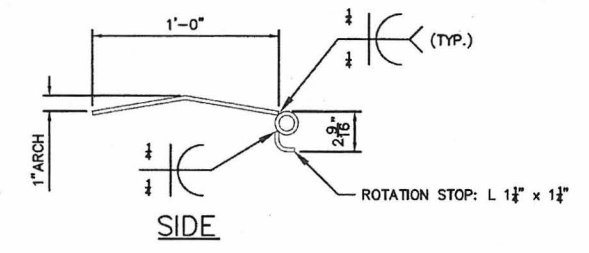
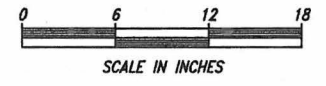


TOP

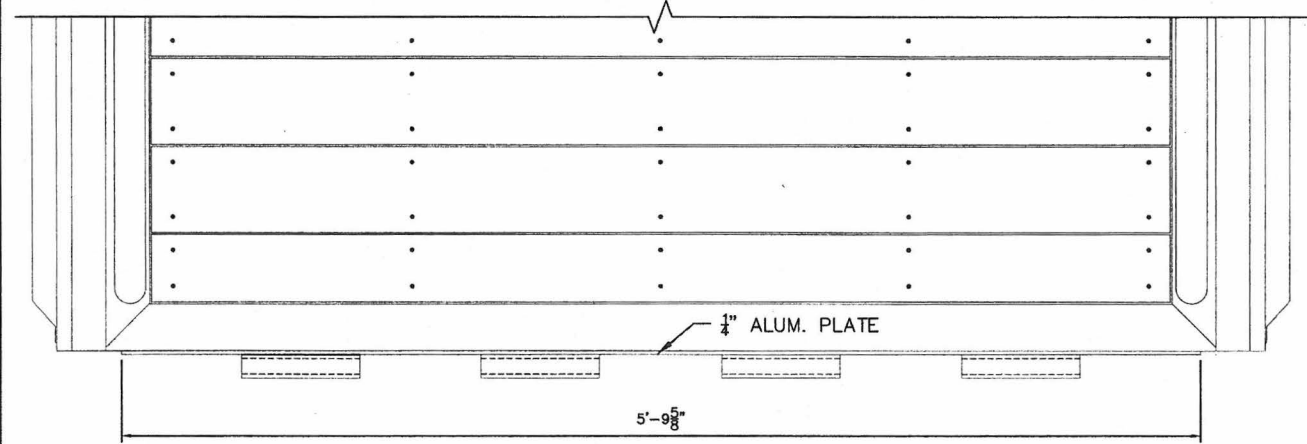


FRONT

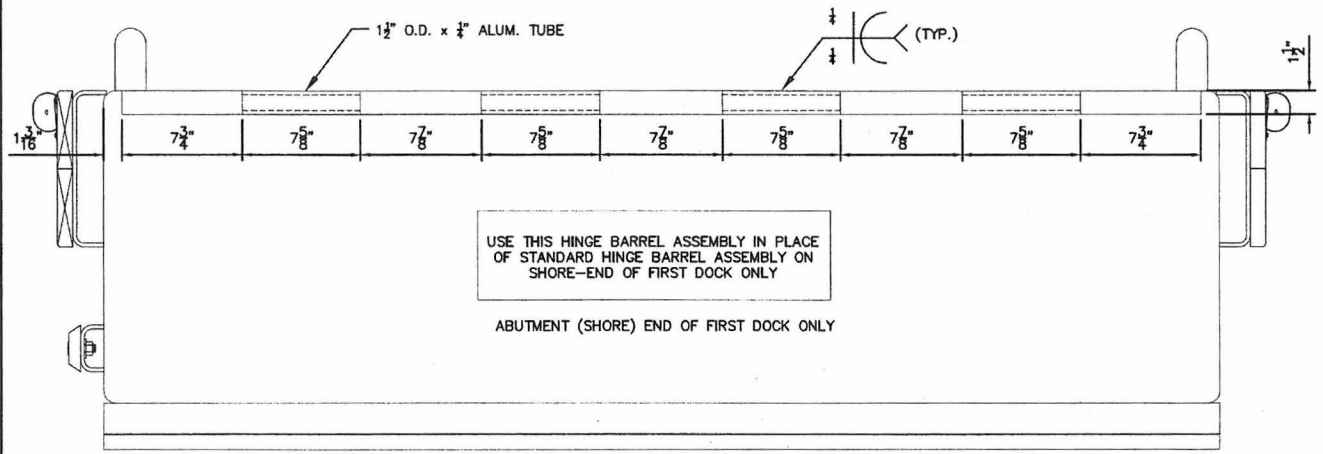
TRANSITION PLATE



SIDE

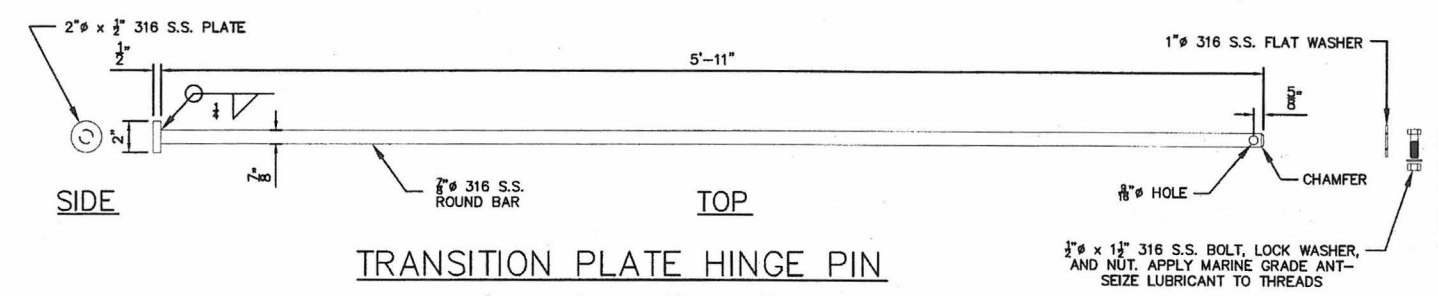
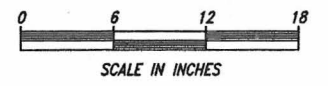


TOP



FRONT

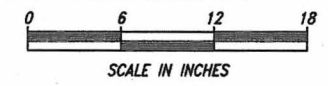
TRANSITION PLATE DOCK HINGE ASSEMBLY



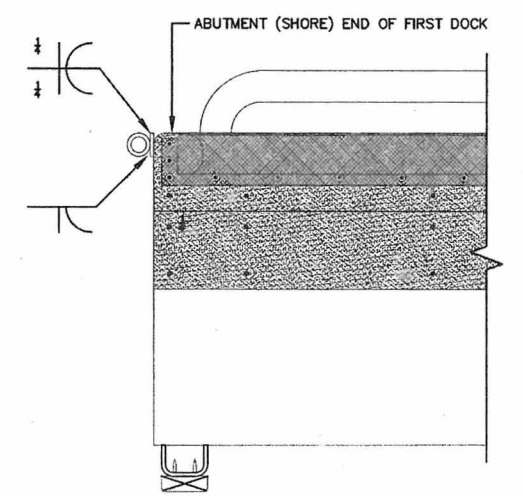
TOP

SIDE

TRANSITION PLATE HINGE PIN

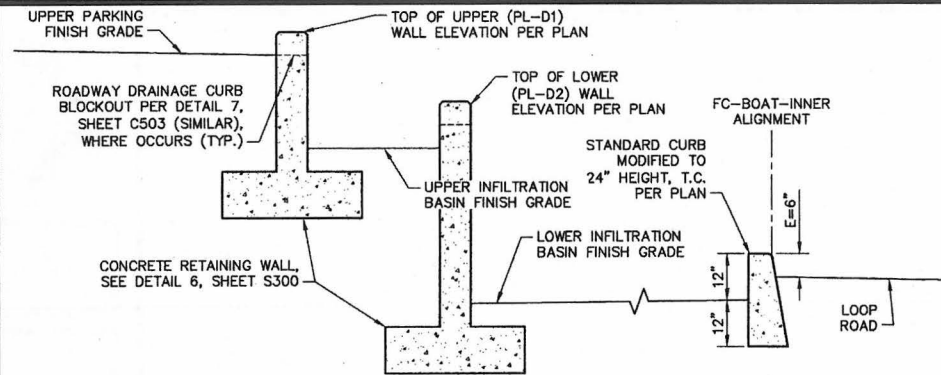


NOTE: SUPPLY THIS HINGE PIN IN PLACE OF STANDARD HINGE PIN FOR FIRST DOCK ONLY

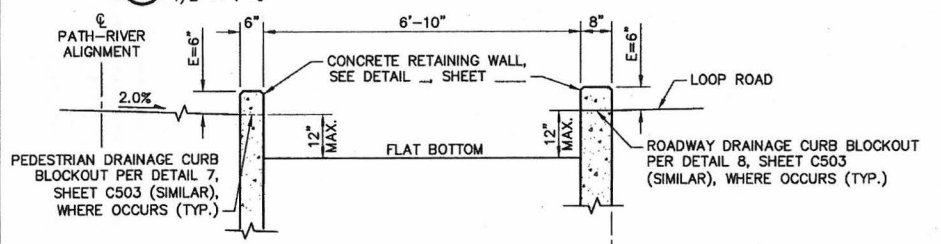


SIDE

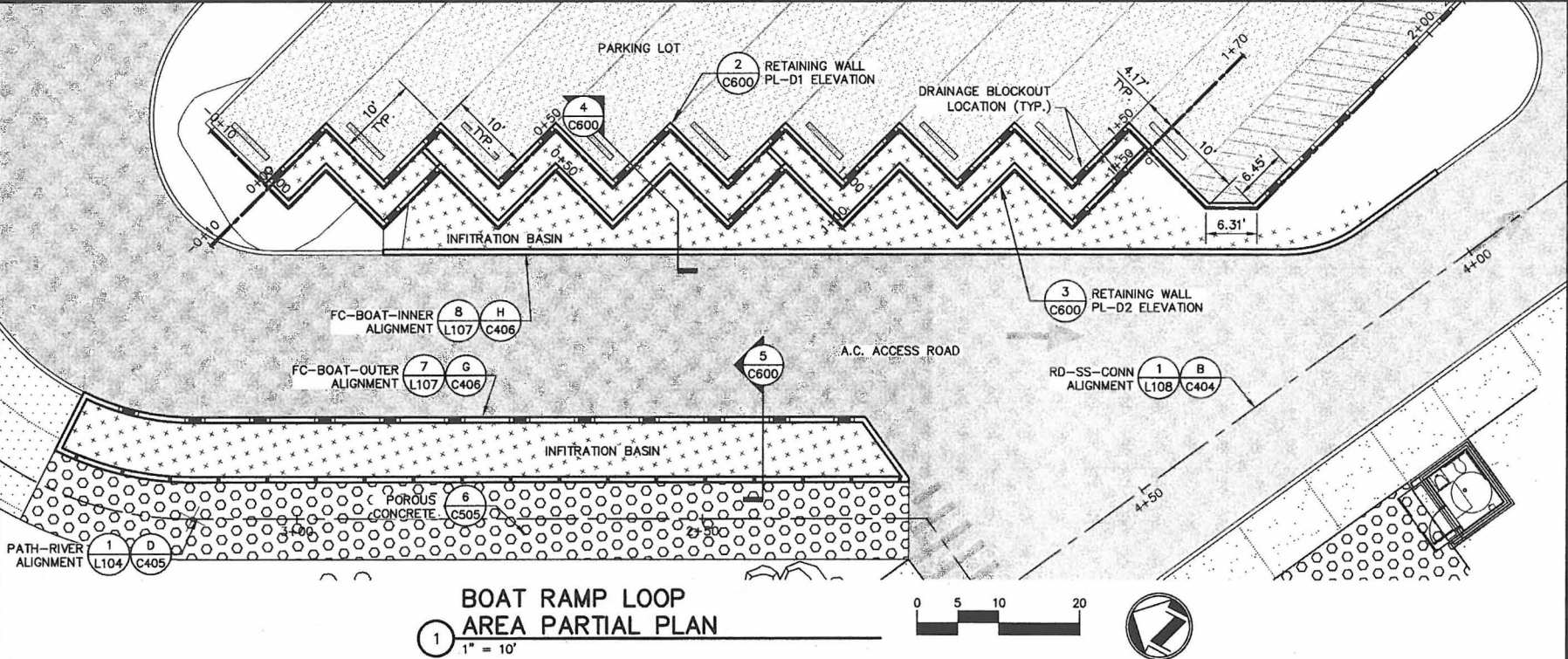
NOTES:
1. ALL PLATE, FLAT BAR, TUBE AND SHAPES SHALL BE 5086 ALUMINUM ALLOY PER THE SPECIFICATIONS.
2. SHAPES MAY BE EXTRUDED OR FORMED BY BENDING.



RETAINING WALL TYPICAL SECTION
1/2" = 1'-0"



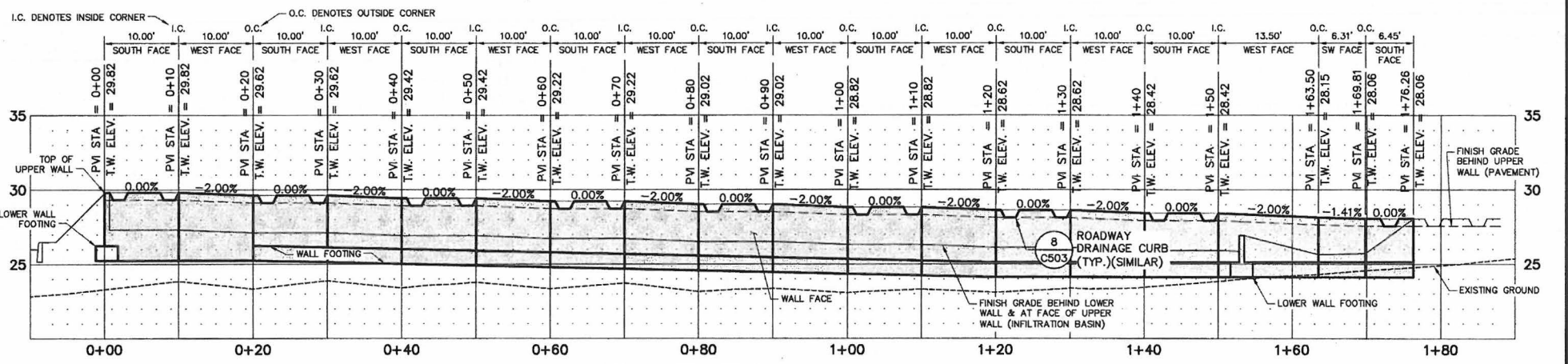
LOOP ROAD INFILTRATION BASIN TYPICAL SECTION
1/2" = 1'-0"



BOAT RAMP LOOP AREA PARTIAL PLAN
1" = 10'

PL-D2 ALIGNMENT

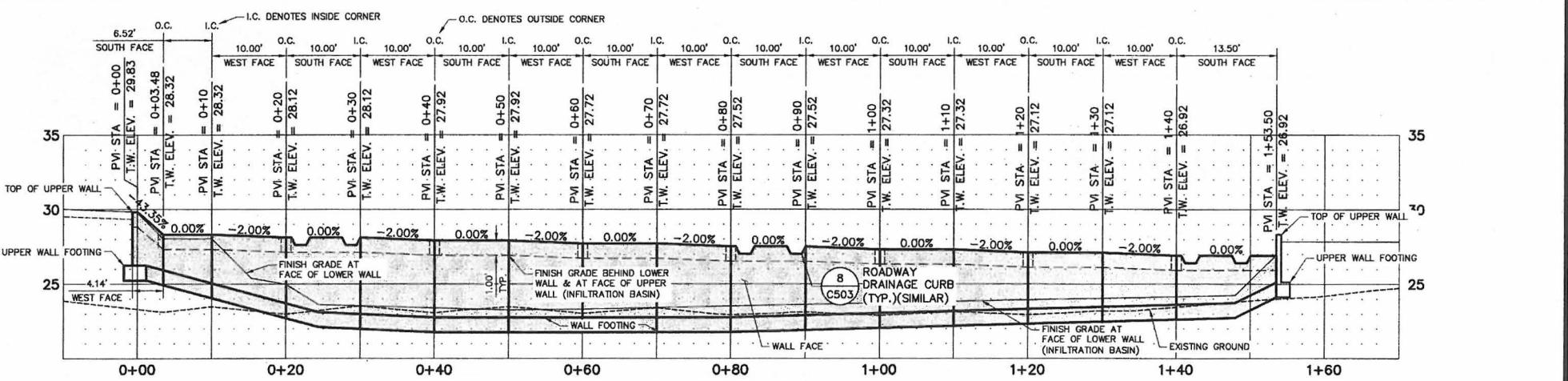
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING
0+00.00	654804.59	7652880.91	0+03.50	654791.66	7652877.00	S16°49'28"W
0+03.50	654791.66	7652877.00	0+10.00	654789.78	7652883.22	S73°10'31"E
0+10.00	654789.78	7652883.22	0+20.00	654780.21	7652880.33	S16°49'27"W
0+20.00	654780.21	7652880.33	0+30.00	654777.32	7652889.90	S73°10'33"E
0+30.00	654777.32	7652889.90	0+40.00	654767.74	7652887.01	S16°49'27"W
0+40.00	654767.74	7652887.01	0+50.00	654764.85	7652896.58	S73°10'33"E
0+50.00	654764.85	7652896.58	0+60.00	654755.28	7652893.68	S16°49'27"W
0+60.00	654755.28	7652893.68	0+70.00	654752.38	7652903.26	S73°10'33"E
0+70.00	654752.38	7652903.26	0+80.00	654742.81	7652900.36	S16°49'27"W
0+80.00	654742.81	7652900.36	0+90.00	654739.92	7652909.93	S73°10'33"E
0+90.00	654739.92	7652909.93	1+00.00	654730.34	7652907.04	S16°49'27"W
1+00.00	654730.34	7652907.04	1+10.00	654727.45	7652916.61	S73°10'33"E
1+10.00	654727.45	7652916.61	1+20.00	654717.88	7652913.72	S16°49'27"W
1+20.00	654717.88	7652913.72	1+30.00	654714.98	7652923.29	S73°10'33"E
1+30.00	654714.98	7652923.29	1+40.00	654705.41	7652920.40	S16°49'27"W
1+40.00	654705.41	7652920.40	1+70.00	654696.73	7652949.11	S73°10'32"E



RETAINING WALL PL-D1 ELEVATION
1" = 10' HORIZ.
1" = 5' VERT.

PL-D1 ALIGNMENT

STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING
0+00.00	654797.91	7652868.44	0+10.00	654792.12	7652887.59	S73°10'33"E
0+10.00	654792.12	7652887.59	0+20.00	654782.55	7652884.69	S16°49'27"W
0+20.00	654782.55	7652884.69	0+30.00	654779.65	7652894.26	S73°10'33"E
0+30.00	654779.65	7652894.26	0+40.00	654770.08	7652891.37	S16°49'27"W
0+40.00	654770.08	7652891.37	0+50.00	654767.19	7652900.94	S73°10'33"E
0+50.00	654767.19	7652900.94	0+60.00	654757.61	7652898.05	S16°49'27"W
0+60.00	654757.61	7652898.05	0+70.00	654754.72	7652907.62	S73°10'33"E
0+70.00	654754.72	7652907.62	0+80.00	654745.15	7652904.73	S16°49'27"W
0+80.00	654745.15	7652904.73	0+90.00	654742.25	7652914.30	S73°10'33"E
0+90.00	654742.25	7652914.30	1+00.00	654732.68	7652911.40	S16°49'27"W
1+00.00	654732.68	7652911.40	1+10.00	654729.79	7652920.98	S73°10'33"E
1+10.00	654729.79	7652920.98	1+20.00	654720.22	7652918.08	S73°10'33"E
1+20.00	654720.22	7652918.08	1+30.00	654717.32	7652927.65	S73°10'33"E
1+30.00	654717.32	7652927.65	1+40.00	654707.75	7652924.76	S16°49'27"W
1+40.00	654707.75	7652924.76	1+50.00	654704.85	7652934.33	S73°10'33"E
1+50.00	654704.85	7652934.33	1+63.50	654691.93	7652930.42	S16°49'27"W
1+63.50	654691.93	7652930.42	1+69.81	654686.34	7652933.36	S27°42'44"E
1+69.81	654686.34	7652933.36	1+81.00	654676.11	7652967.79	S73°26'30"E



RETAINING WALL PL-D2 ELEVATION
1" = 10' HORIZ.
1" = 5' VERT.

Underground Service Alert
Call: TOI FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

RETAINING WALL ALIGNMENT DATA
NO SCALE



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE

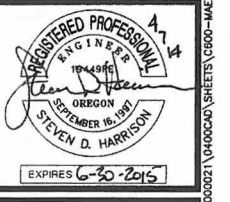
DEPARTMENT	SIGNATURE	APPROVAL DATE
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

WALL LAYOUT

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: WALL LAYOUT

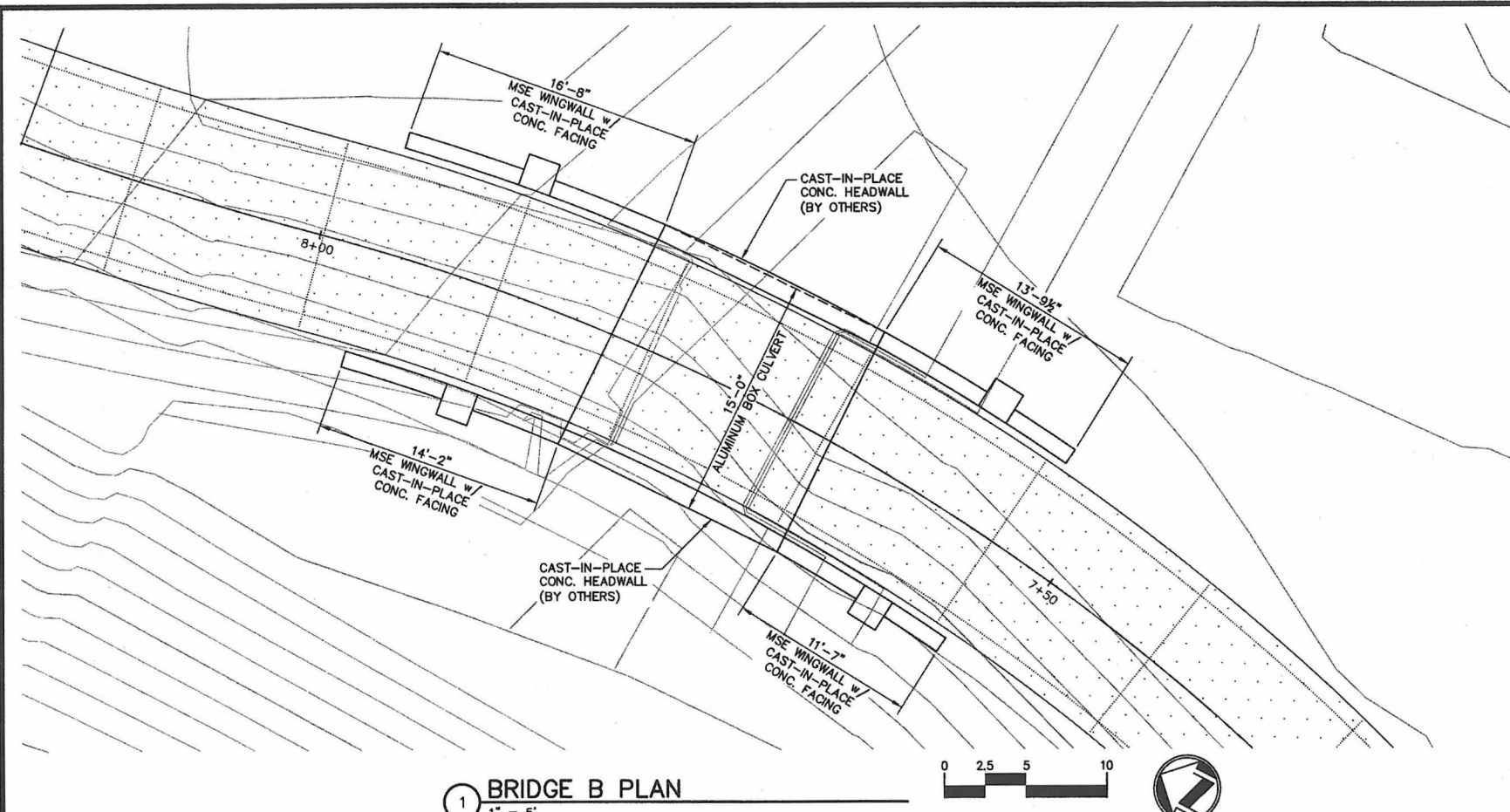
NO.	DATE	REVISION



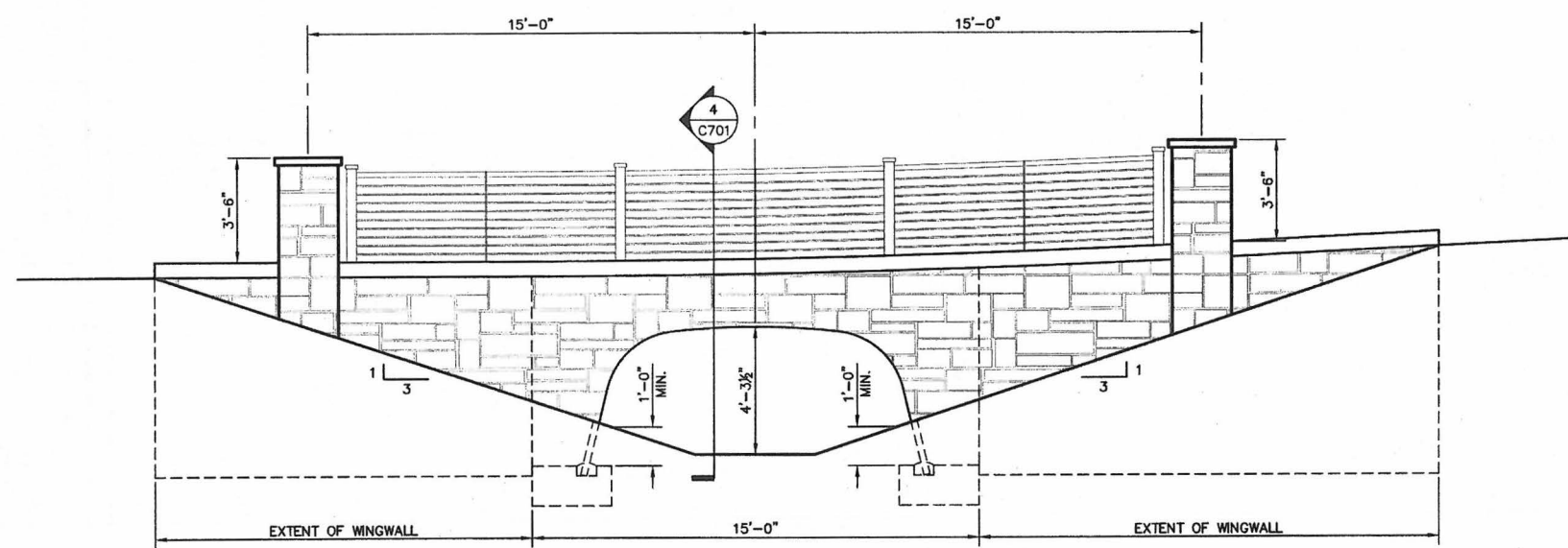
SCALE: AS SHOWN
DATE: 4-1-2014
DRN: RPH
CK:

C600
JOB NO. MAEX0000-0021

Drawing File: \P\2014\2014-07-07-2:32pm User: adm



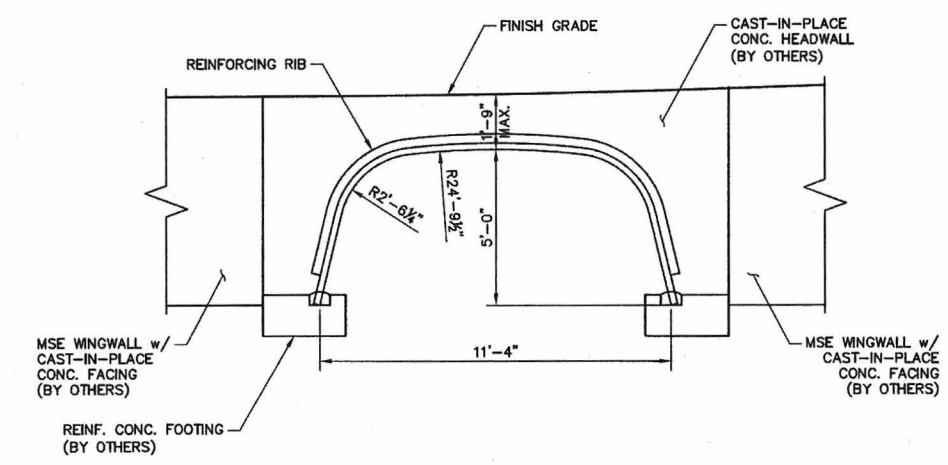
1 BRIDGE B PLAN
1" = 5'



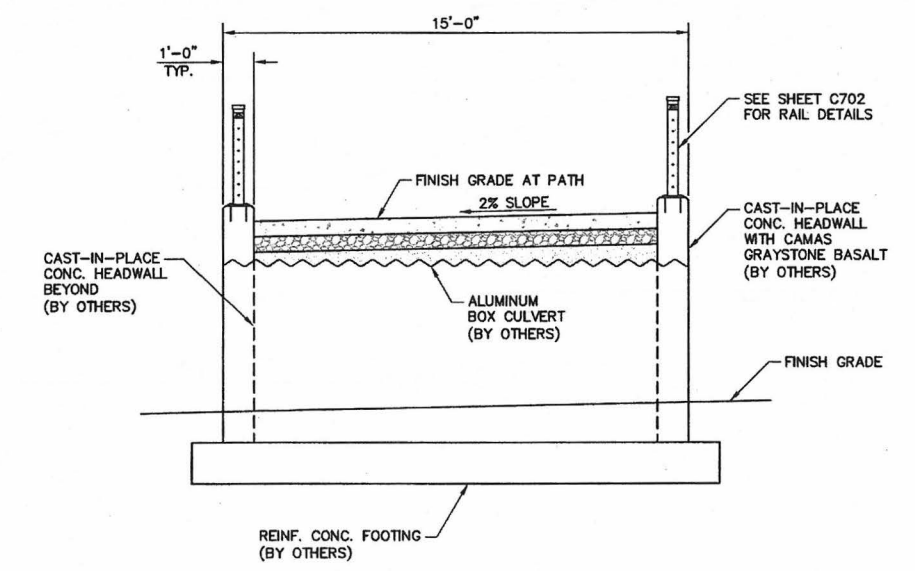
2 BRIDGE B ELEVATION
1" = 3'

SHEET NOTES

1. ALUMINUM BOX CULVERT TO BE DESIGNED FOR HS-20 LOADING.
2. SUBMIT STRUCTURAL CALCULATIONS AND DETAILED DRAWINGS FOR ALUMINUM BOX CULVERT AND WING WALLS FOR REVIEW PRIOR TO CONSTRUCTION.
3. CONSTRUCTION LOADS THAT EXCEED HIGHWAY LOAD LIMITS ARE NOT ALLOWED ON THE STRUCTURE WITHOUT APPROVAL FROM THE ENGINEER.
4. LIVE LOAD TRAFFIC IS NOT ALLOWED ON THE STRUCTURE UNTIL THE STRUCTURE HAS BEEN BACKFILLED AND PAVED.
5. FOR STRUCTURAL AND DEFERRED SUBMITTAL REQUIREMENTS SEE GENERAL STRUCTURAL NOTES SHT. G400.



3 TYPICAL SECTION-ALUMINUM BOX CULVERT
1" = 3'



4 TYPICAL BRIDGE SECTION
1" = 3'

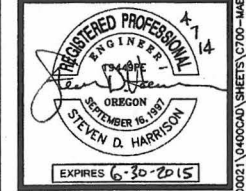


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Fax: 503.223.2701

CITY OF MILWAUKIE	DEPARTMENT	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT	
SIGNATURE		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: PEDESTRIAN BRIDGE B PLAN AND ELEVATIONS

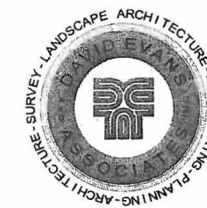
NO.	DATE	REVISION BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN. KEMA
CK.

C701
JOB NO. MAEX0000-0021

Underground Service Alert
Call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

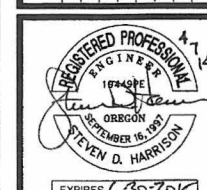


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 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	
	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

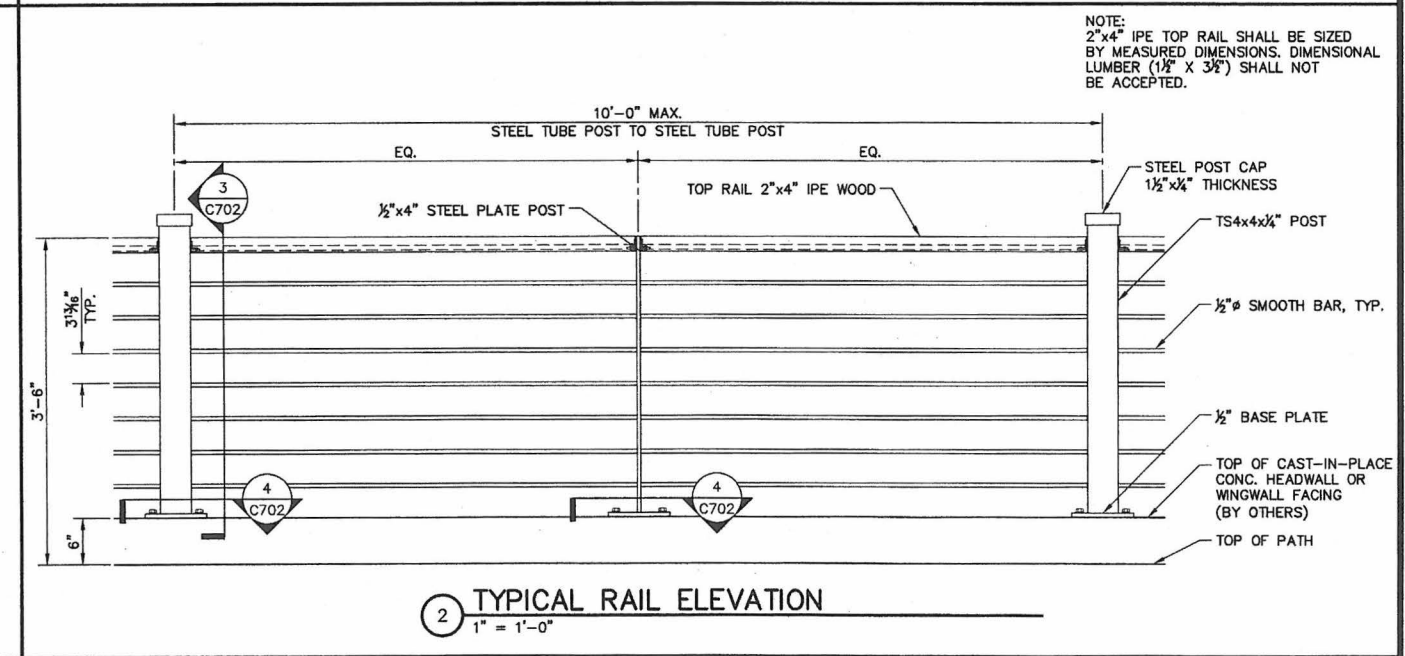
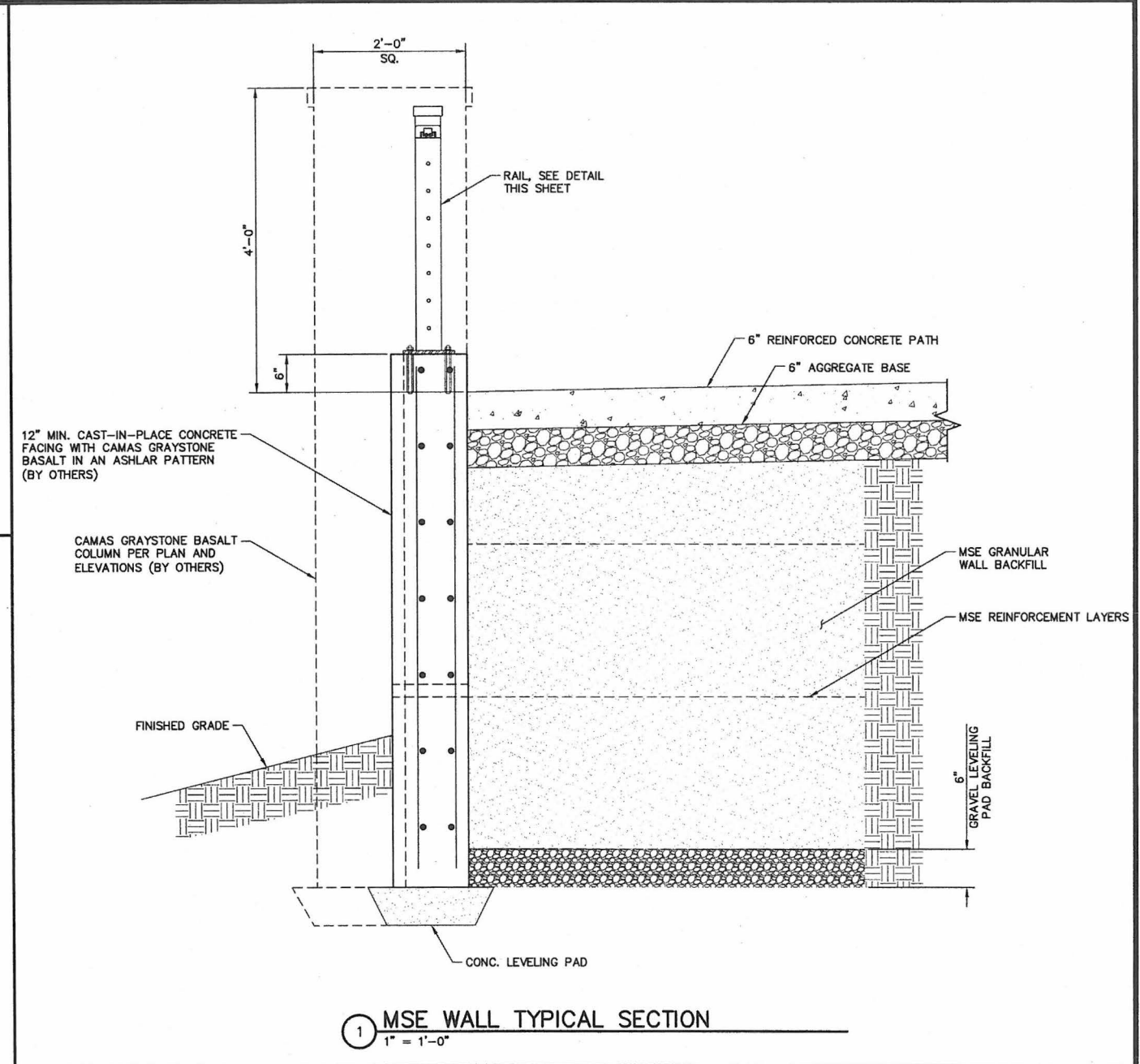
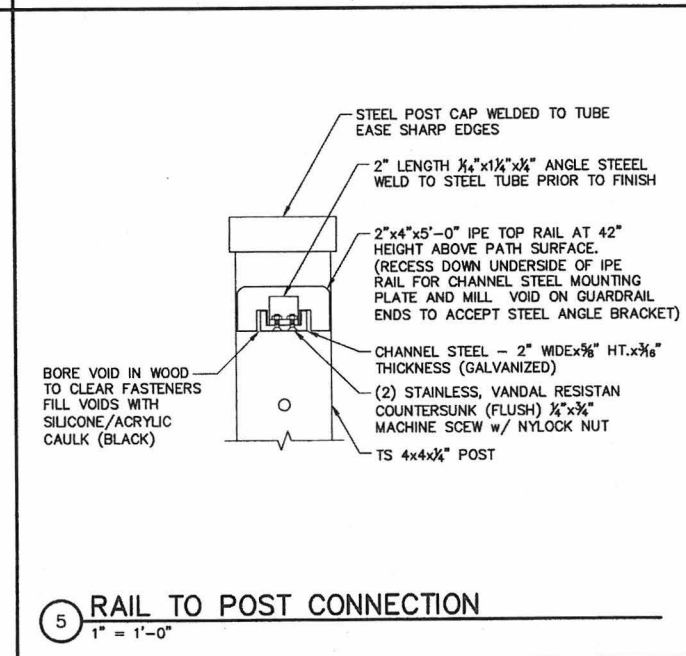
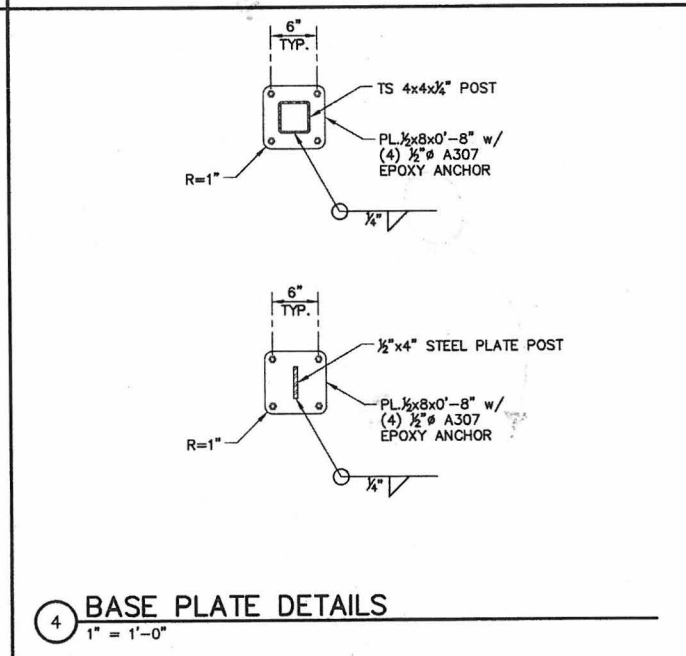
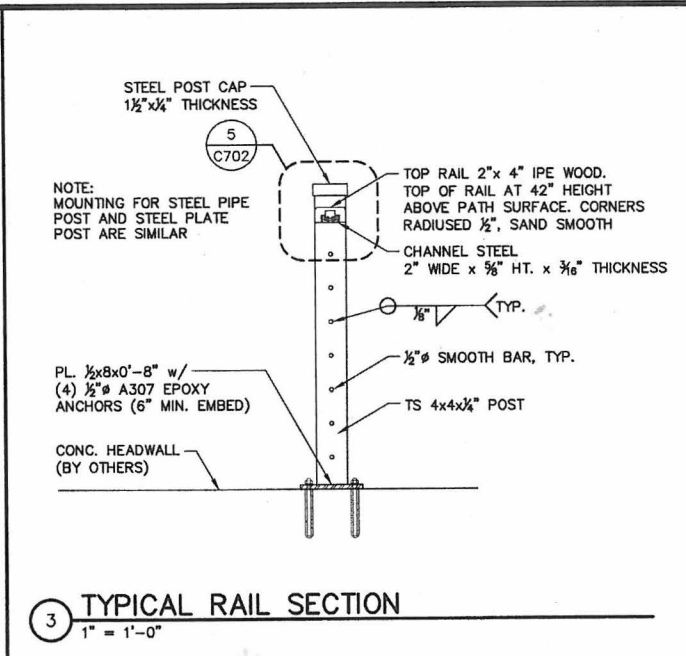
PROJECT: MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK
 SHEET TITLE: PEDESTRIAN BRIDGE
 DETAILS

NO.	DATE	REVISION	BY

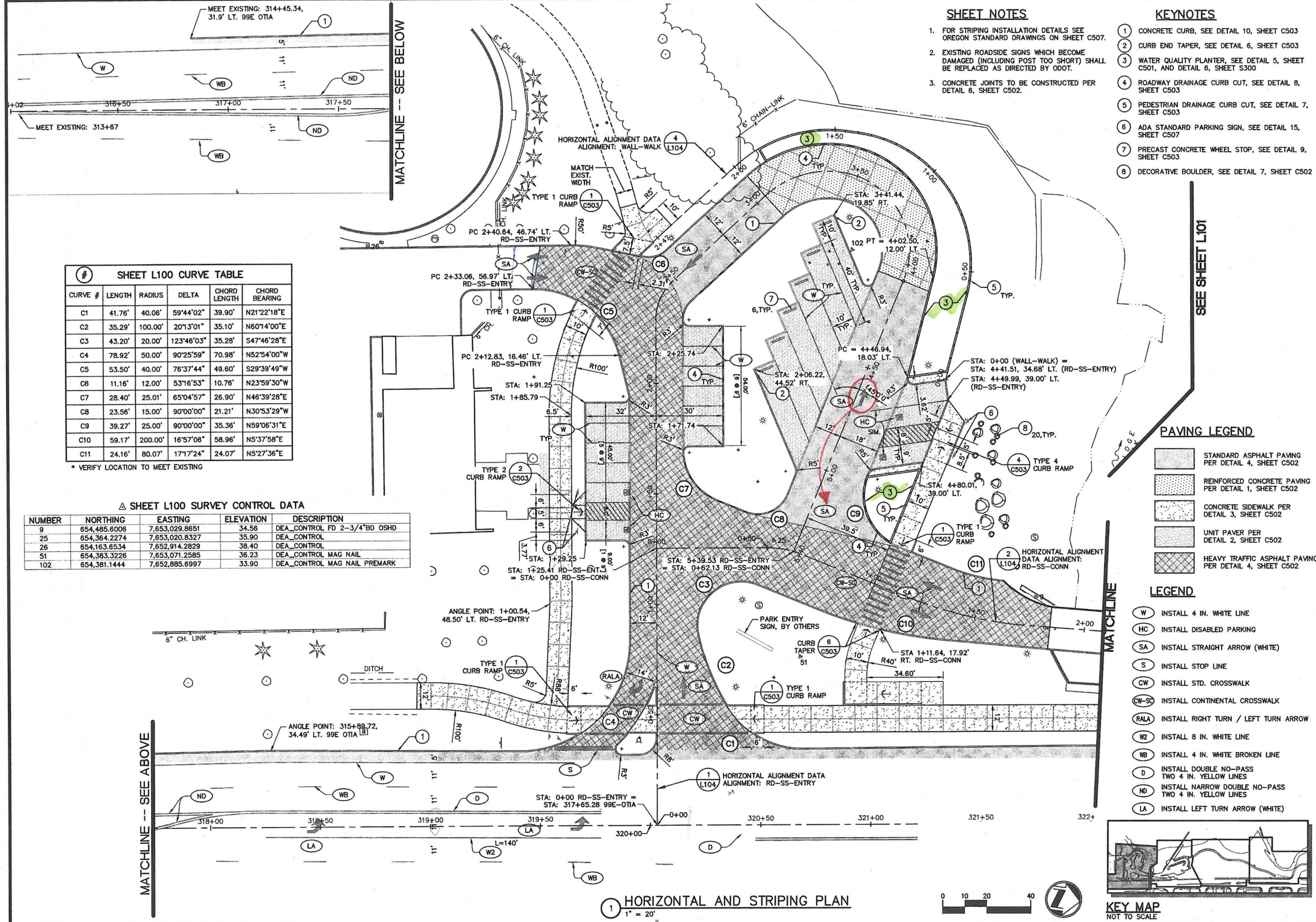


SCALE: AS SHOWN
 DATE: 4-1-2014
 DRN: KEMA
 CK:

C702
 JOB NO. MAEX0000-0021



Underground Service Alert
 Call: TOLL FREE
 1-800-422-4133
 TWO WORKING DAYS
 BEFORE YOU DIG



SHEET NOTES

- FOR STRIPING INSTALLATION DETAILS SEE OREGON STANDARD DRAWINGS ON SHEET C507.
- EXISTING ROADSIDE SIGNS WHICH BECOME DAMAGED (INCLUDING POST TOO SHORT) SHALL BE REPLACED AS DIRECTED BY ODOT.
- CONCRETE JOINTS TO BE CONSTRUCTED PER DETAIL 6, SHEET C502.

KEYNOTES

- CONCRETE CURB, SEE DETAIL 10, SHEET C503
- CURB END TAPER, SEE DETAIL 6, SHEET C503
- WATER QUALITY PLANTER, SEE DETAIL 5, SHEET C501, AND DETAIL 6, SHEET S300
- ROADWAY DRAINAGE CURB CUT, SEE DETAIL 8, SHEET C503
- PEDESTRIAN DRAINAGE CURB CUT, SEE DETAIL 7, SHEET C503
- ADA STANDARD PARKING SIGN, SEE DETAIL 15, SHEET C507
- PRECAST CONCRETE WHEEL STOP, SEE DETAIL 9, SHEET C503
- DECORATIVE BOULDER, SEE DETAIL 7, SHEET C502

SHEET L100 CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA	CHORD LENGTH	CHORD BEARING
C1	41.76'	40.06'	59°44'02"	39.90'	N21°22'18"E
C2	35.29'	100.00'	20°13'01"	35.10'	N60°14'00"E
C3	43.20'	20.00'	123°46'03"	35.28'	S47°46'28"E
C4	78.92'	50.00'	90°25'59"	70.98'	N52°54'00"W
C5	53.50'	40.00'	76°37'44"	49.60'	S29°39'49"W
C6	11.16'	12.00'	53°16'53"	10.76'	N23°59'30"W
C7	28.40'	25.01'	65°04'57"	26.90'	N46°39'28"E
C8	23.56'	15.00'	90°00'00"	21.21'	N30°53'29"W
C9	39.27'	25.00'	90°00'00"	35.36'	N59°06'31"E
C10	59.17'	200.00'	16°57'06"	58.96'	N5°37'58"E
C11	24.16'	80.07'	17°17'24"	24.07'	N5°27'36"E

* VERIFY LOCATION TO MEET EXISTING

△ SHEET L100 SURVEY CONTROL DATA

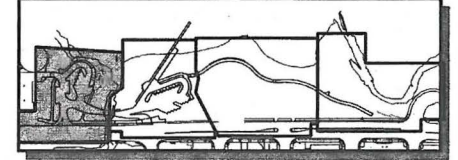
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
9	654,485.6006	7,653,029.8651	34.56	DEA_CONTROL FD 2-3/4"BD OSHD
25	654,364.2274	7,653,020.8327	35.90	DEA_CONTROL
26	654,163.6534	7,652,914.2829	38.40	DEA_CONTROL
51	654,383.3226	7,653,071.2585	36.23	DEA_CONTROL MAG NAIL
102	654,381.1444	7,652,885.6997	33.90	DEA_CONTROL MAG NAIL PREMARK

PAVING LEGEND

- STANDARD ASPHALT PAVING PER DETAIL 4, SHEET C502
- REINFORCED CONCRETE PAVING PER DETAIL 1, SHEET C502
- CONCRETE SIDEWALK PER DETAIL 3, SHEET C502
- UNIT PAVER PER DETAIL 2, SHEET C502
- HEAVY TRAFFIC ASPHALT PAVING PER DETAIL 4, SHEET C502

LEGEND

- INSTALL 4 IN. WHITE LINE
- INSTALL DISABLED PARKING
- INSTALL STRAIGHT ARROW (WHITE)
- INSTALL STOP LINE
- INSTALL STD. CROSSWALK
- INSTALL CONTINENTAL CROSSWALK
- INSTALL RIGHT TURN / LEFT TURN ARROW
- INSTALL 8 IN. WHITE LINE
- INSTALL 4 IN. WHITE BROKEN LINE
- INSTALL DOUBLE NO-PASS TWO 4 IN. YELLOW LINES
- INSTALL NARROW DOUBLE NO-PASS TWO 4 IN. YELLOW LINES
- INSTALL LEFT TURN ARROW (WHITE)



DAVE WILLIAMS ARCHITECTURE
 SURVEY - LANDSCAPE ARCHITECTURE ENGINEERING - PLANNING

2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.8663
 Fax: 503.223.2701

CITY OF MILWAUKIE

DEPARTMENT	SIGNATURE	APPROVAL DATE
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

HORIZONTAL AND STRIPING PLAN SHEET 1

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
 SHEET TITLE: HORIZONTAL AND STRIPING PLAN SHEET 1

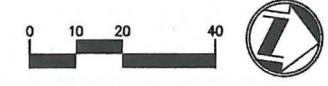
NO.	DATE	REVISION	BY

REGISTERED
 383
Raymond Gill Williams III
 OREGON
 11/07/97
 LANDSCAPE ARCHITECT

SCALE: AS SHOWN
 DATE: 4-1-2014
 DRN: RFH
 CK: SDH

L100
 JOB NO. MAEX0000-0021

1 HORIZONTAL AND STRIPING PLAN
 1" = 20'



KEY MAP
 NOT TO SCALE

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
 SHEET TITLE: HORIZONTAL AND STRIPING PLAN SHEET 1
 DATE/TIME: Mar 27, 2014 - 8:00am User: sdh
 Drawing File: \\Pc01s11



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CITY OF MILWAUKIE	DEPARTMENT	APPROVAL DATE
	SIGNATURE	
CITY OF MILWAUKIE	CITY LANDSCAPE ARCHITECT	
	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: HORIZONTAL AND STRIPING PLAN
SHEET 1

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: RFH
CK: SDH

L100
JOB NO. MAEX0000-0021

SHEET NOTES

- FOR STRIPING INSTALLATION AND DETAILS SEE OREGON STANDARD DRAWINGS: TM500, TM501, TM502, TM503, TM515, TM521, TM530, TM531, TM560, TM561, RD700, RD720, RD755, RD759
- INSTALL PAVEMENT MARKERS PER ODOT STD DWG TM515.
- ALL PERMANENT PAVEMENT LINES ARE 'METHOD A' THERMOPLASTIC, EXTRUDED, SURFACE, PROFILED. ALL ON-STREET STRIPING SHALL BE PROFILED EXCEPT FOR THE 4" WIDE WHITE EDGE LINE.
- ALL TRANSVERSE PAVEMENT MARKINGS, LEGENDS, AND BARS ARE 'TYPE BH-S', PREFORMED, FUSED THERMOPLASTIC FILM, HIGH SKID.

KEYNOTES

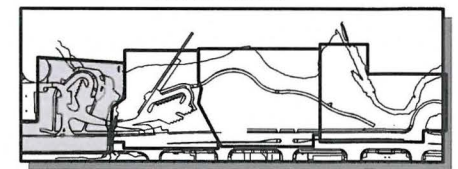
- INSTALL STANDARD CURB (E=7") PER ODOT STD DWG RD700
- INSTALL TYPICAL SETBACK SIDEWALK PER ODOT STD DWG RD720
- INSTALL TYPICAL PERPENDICULAR SIDEWALK RAMP PER ODOT STD DWG RD755
- INSTALL TRUNCATED DOME DETECTABLE WARNING SURFACE PER ODOT STD DWG RD759
- INSTALL TYPE B 12" WIDE CONCRETE TRAFFIC SEPARATOR PER ODOT STD DWG RD706. COLOR YELLOW WITH TWO (2) POSITIONING GUIDE REFLECTORS AT 20 FEET ON CENTER.
- INSTALL TYPE B 12" WIDE CONCRETE TRAFFIC SEPARATOR PER ODOT STD DWG RD706

PAVING LEGEND

- STANDARD ASPHALT PAVING PER DETL 4, SHEET C502 (MATCH EXISTING SECTION WITHIN SE MCLOUGHLIN BLVD)
- REINFORCED CONCRETE PAVING PER DETAIL 1, SHEET C502
- CONCRETE SIDEWALK PER DETAIL 3, SHEET C502
- UNIT PAVER PER DETAIL 2, SHEET C502
- HEAVY TRAFFIC ASPHALT PAVING PER DETAIL 4, SHEET C502

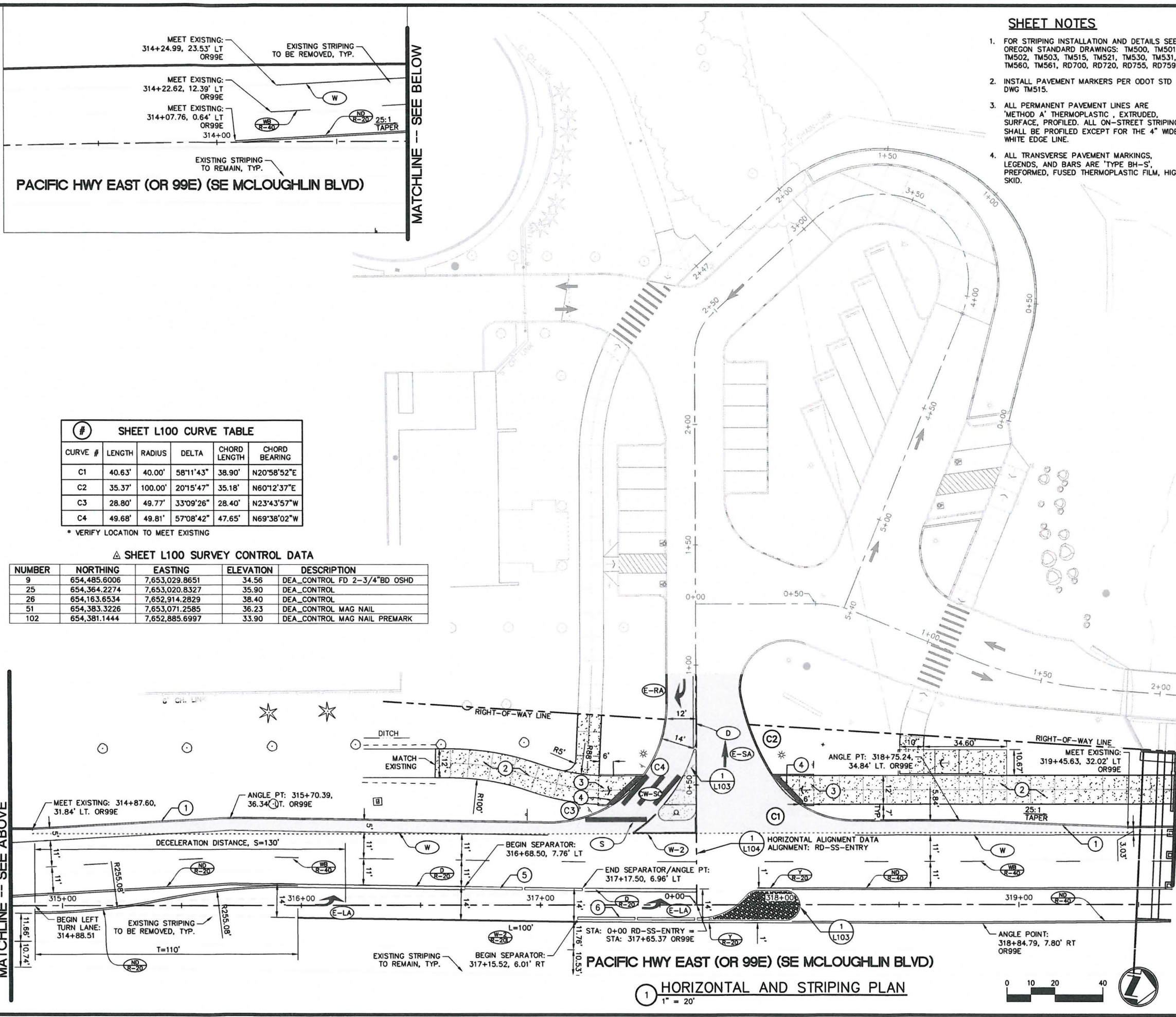
LEGEND

- W INSTALL 4" WIDE WHITE LINE PER ODOT STD DWG TM500
- W-2 INSTALL 8" WIDE WHITE LINE PER ODOT STD DWG TM500
- E-SA INSTALL WHITE ELONGATED STRAIGHT ARROW PER ODOT STD DWG TM501
- S INSTALL 1" WHITE STOP BAR PER ODOT STD DWG TM503
- CW-SC INSTALL 2" WHITE STAGGERED CONTINENTAL CROSSWALK BARS PER ODOT STD DWG TM503
- E-LA INSTALL WHITE ELONGATED LEFT TURN ARROW PER ODOT STD DWG TM501
- W-2A INSTALL 8" WHITE CHANNELIZING LINE WITH POSITIONING GUIDE REFLECTORS PER ODOT STD DWG TM502
- WB-R-20 INSTALL 4" WHITE BROKEN LINE WITH SUPPLEMENTATION REFLECTORS PER ODOT STD DWG TM502
- D-R-20 INSTALL TWO 4" DOUBLE NO-PASS YELLOW LINES WITH POSITIONING GUIDE REFLECTORS PER ODOT STD DWG TM502
- ND-R-20 INSTALL TWO 4" NARROW DOUBLE NO-PASS YELLOW LINES WITH POSITIONING GUIDE REFLECTORS PER ODOT STD DWG TM502
- ND-40 INSTALL TWO 4" NARROW DOUBLE NO-PASS YELLOW LINES WITH POSITIONING GUIDE REFLECTORS PER ODOT STD DWG TM502
- Y-R-20 INSTALL 4" YELLOW LINE WITH POSITIONING GUIDE REFLECTORS PER Y/R-40 ODOT STD DWG TM502 MODIFIED FOR REFLECTORS TO BE PLACED AT 20 FEET ON CENTER.



KEY MAP
NOT TO SCALE

ODOT R/W FILE NO. 4B-20-18



SHEET L100 CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA	CHORD LENGTH	CHORD BEARING
C1	40.63'	40.00'	58°11'43"	38.90'	N20°58'52"E
C2	35.37'	100.00'	20°15'47"	35.18'	N60°12'37"E
C3	28.80'	49.77'	33°09'26"	28.40'	N23°43'57"W
C4	49.68'	49.81'	57°08'42"	47.65'	N69°38'02"W

* VERIFY LOCATION TO MEET EXISTING

SHEET L100 SURVEY CONTROL DATA

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
9	654,485.6006	7,653,029.8651	34.56	DEA_CONTROL FD 2-3/4"BD OSHD
25	654,364.2274	7,653,020.8327	35.90	DEA_CONTROL
26	654,163.6534	7,652,914.2829	38.40	DEA_CONTROL
51	654,383.3226	7,653,071.2585	36.23	DEA_CONTROL MAG NAIL
102	654,381.1444	7,652,885.6997	33.90	DEA_CONTROL MAG NAIL PREMARK

1 HORIZONTAL AND STRIPING PLAN
1" = 20'





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CITY LANDSCAPE ARCHITECT		COMMUNITY DEVELOPMENT	
COMMUNITY DEVELOPMENT		PUBLIC WORKS	

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: HORIZONTAL AND STRIPING PLAN
SHEET 3

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: RFH
CK: SDH

L102
JOB NO. MAEX0000-0021

△ SHEET L102 SURVEY CONTROL DATA

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
11	654,971.0016	7,653,026.9597	42.77	DEA_CONTROL 1/2" IR W/RPC
12	655,300.3242	7,652,981.9827	48.45	DEA_CONTROL 1-1/8"BD IN WALK
21	655,017.9284	7,652,993.9388	43.25	DEA_CONTROL
22	655,297.8029	7,652,958.5097	48.79	DEA_CONTROL
103	655,253.5484	7,653,026.6062	48.46	DEA_CONTROL MAG NAIL PREMARK

KEYNOTES

- 1 CONCRETE CURB, SEE DETAIL 10, SHEET C503
- 2 DECORATIVE BOULDER, SEE DETAIL 7, SHEET C502
- 3 CRIB WALL, SEE DETAIL 2, SHEET C501
- 4 PEDESTRIAN BRIDGE "B", SEE SHEET C701 FOR DETAILS
- 5 CONCRETE SEATWALL, SEE DETAIL 8, SHEET C502

SHEET NOTES

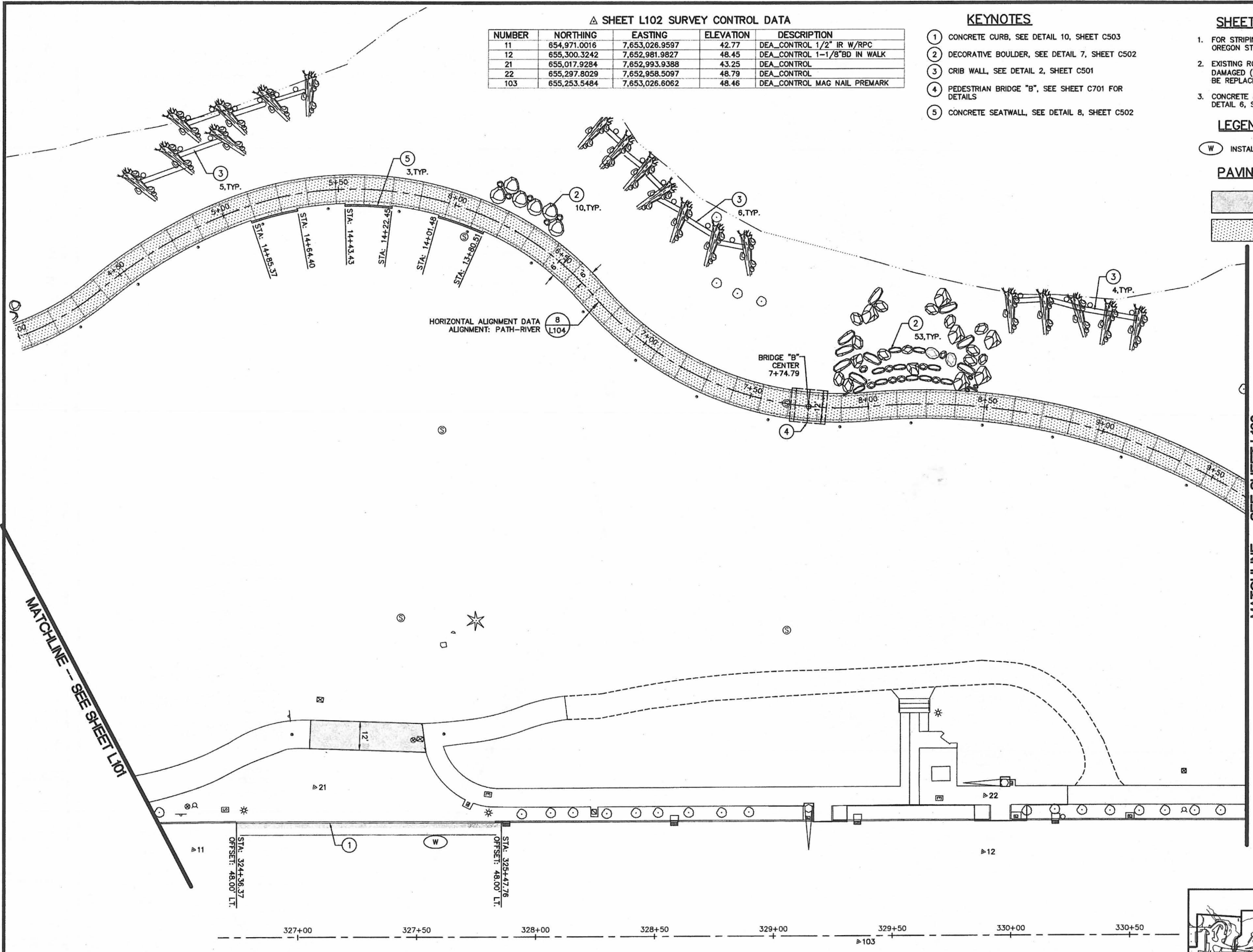
1. FOR STRIPING INSTALLATION DETAILS SEE OREGON STANDARD DRAWINGS ON SHEET C507.
2. EXISTING ROADSIDE SIGNS WHICH BECOME DAMAGED (INCLUDING POST TOO SHORT) SHALL BE REPLACED AS DIRECTED BY ODOT.
3. CONCRETE JOINTS TO BE CONSTRUCTED PER DETAIL 6, SHEET C502.

LEGEND

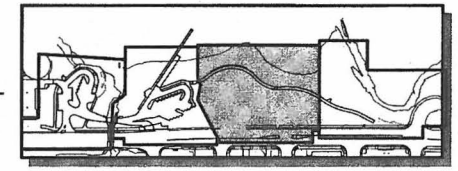
(W) INSTALL 4 IN. WHITE LINE

PAVING LEGEND

[Pattern] STANDARD ASPHALT PAVING PER DETAIL 4, SHEET C502
 [Pattern] REINFORCED CONCRETE PAVING PER DETAIL 1, SHEET C502



1 HORIZONTAL AND STRIPING PLAN
1" = 20'



KEY MAP
NOT TO SCALE

User: sgh Date/Time: Mar 27, 2014 - 1:31 pm User: sgh



SHEET NOTES

- FOR STRIPING INSTALLATION DETAILS SEE OREGON STANDARD DRAWINGS ON SHEET C507.
- EXISTING ROADSIDE SIGNS WHICH BECOME DAMAGED (INCLUDING POST TOO SHORT) SHALL BE REPLACED AS DIRECTED BY ODOT.
- CONCRETE JOINTS TO BE CONSTRUCTED PER DETAIL 6, SHEET C502.

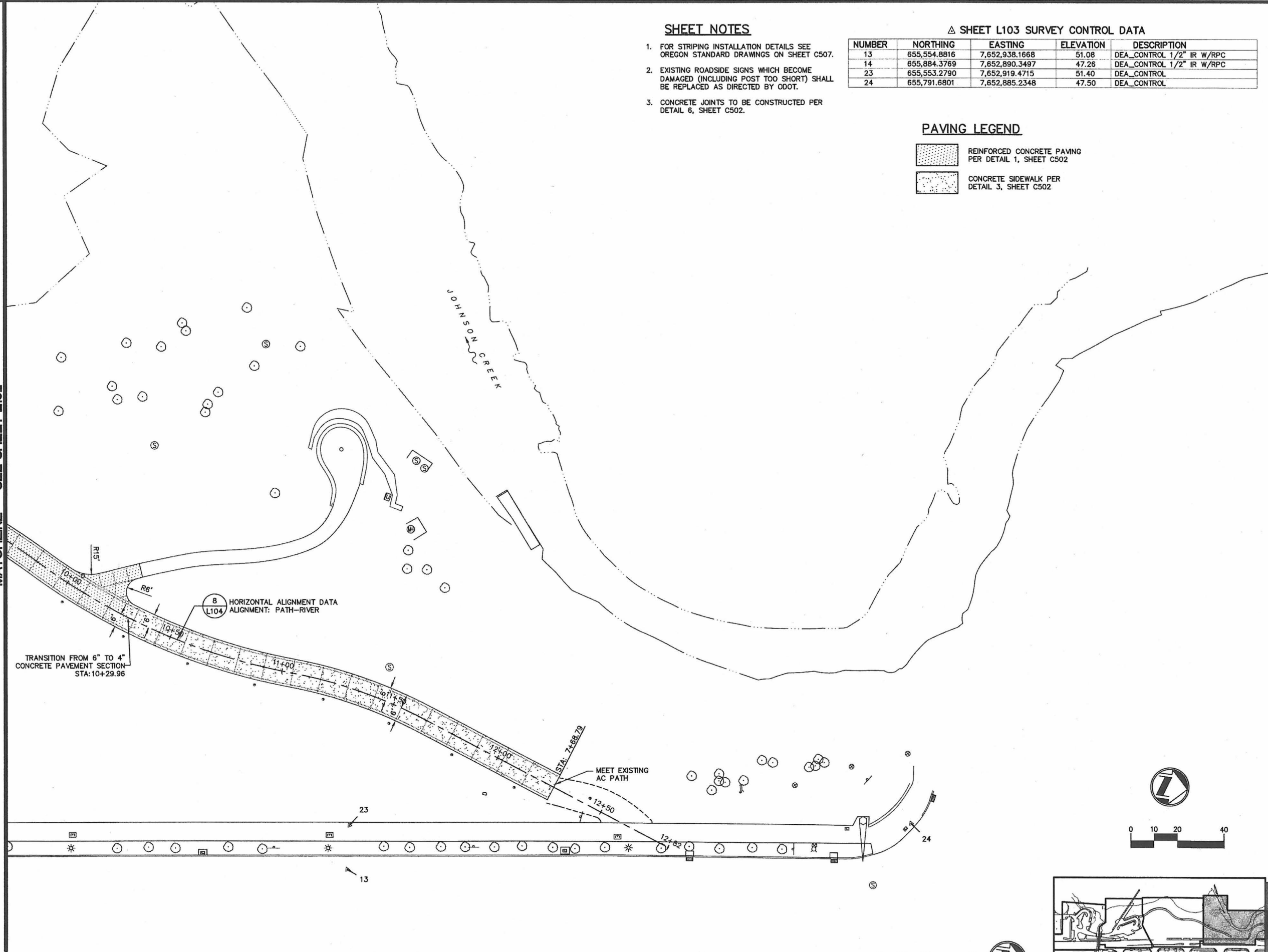
△ SHEET L103 SURVEY CONTROL DATA

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
13	655,554.8816	7,652,938.1668	51.08	DEA_CONTROL 1/2" IR W/RPC
14	655,884.3769	7,652,890.3497	47.26	DEA_CONTROL 1/2" IR W/RPC
23	655,553.2790	7,652,919.4715	51.40	DEA_CONTROL
24	655,791.6801	7,652,885.2348	47.50	DEA_CONTROL

PAVING LEGEND

-  REINFORCED CONCRETE PAVING PER DETAIL 1, SHEET C502
-  CONCRETE SIDEWALK PER DETAIL 3, SHEET C502

MATCHLINE -- SEE SHEET L102

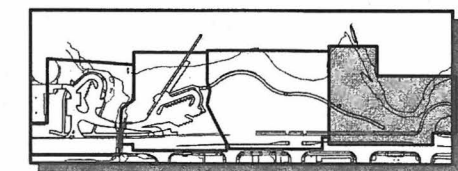
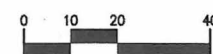


8 HORIZONTAL ALIGNMENT DATA
L104 ALIGNMENT: PATH-RIVER

TRANSITION FROM 6" TO 4"
CONCRETE PAVEMENT SECTION
STA: 10+29.96

MEET EXISTING
AC PATH

1 HORIZONTAL AND STRIPING PLAN
1" = 20'



KEY MAP
NOT TO SCALE



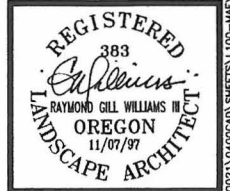
2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6683
Fax: 503.223.2701

CITY OF MILWAUKIE		APPROVAL DATE	
DEPARTMENT	SIGNATURE		
CITY LANDSCAPE ARCHITECT			
COMMUNITY DEVELOPMENT			
PUBLIC WORKS			

PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
HORIZONTAL AND STRIPING PLAN
SHEET 4

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN. RFH
CK. SDH

L103
JOB NO. MAEX0000-0021

FC-BOAT-OUTER												
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD LENGTH	CHORD BEARING
0+00.00	654699.19	7652897.34	1+02.80	654789.81	7652848.80	N28°10'33"W	102.80'					
1+02.80	654789.81	7652848.80	1+37.02	654822.11	7652851.34			30.00'	34.22'	65°21'44"	32.40'	N4°30'19"E
1+37.02	654822.11	7652851.34	1+86.86	654839.71	7652895.39			46.00'	49.84'	62°04'35"	47.44'	N68°13'27"E
1+86.86	654839.71	7652895.39	1+95.57	654837.74	7652903.87			66.00'	8.71'	7°33'43"	8.70'	S76°57'24"E
1+95.57	654837.74	7652903.87	2+28.57	654828.19	7652935.45	S73°10'33"E	32.99'					
2+28.57	654828.19	7652935.45	3+60.85	654711.58	7652997.91	S28°10'33"E	132.28'					
3+60.85	654711.58	7652997.91	3+95.93	654678.63	7653009.54			115.00'	35.08'	17°28'40"	34.94'	S19°26'12"E
3+95.93	654678.63	7653009.54	4+12.66	654662.53	7653014.00			100.00'	16.72'	9°34'58"	16.71'	S15°29'21"E
4+12.66	654662.53	7653014.00	4+30.36	654645.93	7653020.14	S20°16'50"E	17.70'					

HORIZONTAL ALIGNMENT DATA
ALIGNMENT: FC-BOAT-OUTER
6 NONE

FC-BOAT-INNER												
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD LENGTH	CHORD BEARING
0+00.00	654663.96	7652957.26	0+17.28	654670.07	7652971.19			10.00'	17.28'	99°00'00"	15.21'	N66°19'27"E
0+17.28	654670.07	7652971.19	0+17.58	654670.35	7652971.28	N16°49'27"E	0.29'					
0+17.58	654670.35	7652971.28	0+31.75	654683.92	7652975.38	N16°49'27"E	14.17'					
0+31.75	654683.92	7652975.38	0+39.60	654691.53	7652974.62			10.00'	7.85'	45°00'00"	7.85'	N5°40'33"W
0+39.60	654691.53	7652974.62	1+55.22	654793.45	7652920.03	N28°10'33"W	115.62'					
1+55.22	654793.45	7652920.03	1+91.92	654814.04	7652891.21			40.00'	36.70'	52°33'43"	35.42'	N54°27'24"W
1+91.92	654814.04	7652891.21	2+11.80	654807.77	7652873.20			20.00'	19.88'	56°57'11"	19.07'	S70°47'09"W
2+11.80	654807.77	7652873.20	2+30.25	654790.59	7652871.07			15.00'	18.45'	70°29'06"	17.31'	S70°04'01"W
2+30.25	654790.59	7652871.07	2+97.18	654731.59	7652902.67	S28°10'33"E	66.93'					
2+97.18	654731.59	7652902.67	3+55.41	654680.26	7652930.17	S28°10'33"E	58.23'					
3+55.41	654680.26	7652930.17	3+84.84	654673.84	7652936.85			15.00'	9.42'	36°00'00"	9.27'	S46°10'33"E
3+84.84	654673.84	7652936.85	3+87.51	654663.96	7652957.26	S64°10'33"E	22.68'					

HORIZONTAL ALIGNMENT DATA
ALIGNMENT: FC-BOAT-INNER
7 NONE

PATH-RIVER (1)												
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD LENGTH	CHORD BEARING
2+00.88	654684.91	7652871.03	2+22.35	654704.19	7652880.48	N26°07'42"E	21.47'					
2+22.35	654704.19	7652880.48	3+12.85	654783.97	7652837.74	N28°10'33"W	90.50'					
3+12.85	654783.97	7652837.74	3+44.07	654814.25	7652833.95			42.50'	31.22'	42°05'09"	30.52'	N7°07'58"W
3+44.07	654814.25	7652833.95	3+63.44	654833.47	7652834.90			50.00'	19.37'	22°11'30"	19.25'	N2°48'52"E
3+63.44	654833.47	7652834.90	4+39.14	654899.01	7652800.06			110.00'	75.71'	39°26'01"	74.22'	N27°59'53"W
4+39.14	654899.01	7652800.06	5+06.52	654951.78	7652758.67			201.00'	67.38'	19°12'24"	67.06'	N38°06'42"W
5+06.52	654951.78	7652758.67	6+27.68	655068.94	7652751.05			140.00'	121.15'	49°34'59"	117.41'	N3°43'00"W
6+27.68	655068.94	7652751.05	6+70.01	655104.97	7652772.86			120.00'	42.33'	20°12'43"	42.11'	N31°10'51"E
6+70.01	655104.97	7652772.86	8+00.00	655226.36	7652803.36			137.00'	129.99'	54°21'53"	125.17'	N14°06'17"E
8+00.00	655226.36	7652803.36	9+84.72	655405.52	7652827.25			256.00'	184.72'	41°20'37"	180.74'	N7°35'39"E
9+84.72	655405.52	7652827.25	11+04.45	655519.99	7652858.72			266.00'	119.72'	25°47'17"	118.72'	N15°22'18"E
11+04.45	655519.99	7652858.72	11+64.70	655578.91	7652870.24			201.00'	60.26'	17°10'36"	60.03'	N11°03'58"E
11+64.70	655578.91	7652870.24	12+82.35	655689.70	7652909.81	N19°39'16"E	117.64'					

HORIZONTAL ALIGNMENT DATA
ALIGNMENT: PATH-RIVER
8 NONE

RD-SS-ENTRY												
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD LENGTH	CHORD BEARING
0+00.00	654329.91	7653155.81	2+28.74	654297.61	7652929.35	S81°53'00"W	228.74'					
2+28.74	654297.61	7652929.35	2+48.63	654302.82	7652910.74			24.00'	19.89'	47°29'04"	19.33'	N74°22'28"W
2+48.63	654302.82	7652910.74	3+05.02	654338.58	7652867.15	N50°37'56"W	56.38'					
3+05.02	654338.58	7652867.15	3+42.11	654371.03	7652851.79			42.00'	37.09'	50°36'03"	35.90'	N25°19'54"W
3+42.11	654371.03	7652851.79	4+07.54	654405.96	7652896.57			36.00'	65.43'	104°08'24"	56.79'	N52°02'19"E
4+07.54	654405.96	7652896.57	5+39.53	654373.79	7653024.58	S75°53'29"E	131.99'					

HORIZONTAL ALIGNMENT DATA
ALIGNMENT: RD-SS-ENTRY
1 NONE

RD-SS-CONN												
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD LENGTH	CHORD BEARING
0+00.00	654312.20	7653031.66	0+50.47	654362.17	7653024.53	N8°07'00"W	50.47'					
0+50.47	654362.17	7653024.53	0+65.99	654377.57	7653025.34			40.00'	15.52'	22°13'31"	15.42'	N2°59'46"E
0+65.99	654377.57	7653025.34	1+17.72	654427.74	7653037.95	N14°06'31"E	51.74'					
1+17.72	654427.74	7653037.95	1+69.17	654478.73	7653043.52			190.17'	51.45'	15°29'59"	51.29'	N6°14'15"E
1+69.17	654478.73	7653043.52	2+47.57	654556.98	7653038.64	N3°34'06"W	78.40'					
2+47.57	654556.98	7653038.64	2+57.78	654566.93	7653036.54			35.00'	10.21'	16°42'43"	10.17'	N11°55'28"W
2+57.78	654566.93	7653036.54	2+97.56	654604.25	7653022.75	N20°16'50"W	39.78'					
2+97.56	654604.25	7653022.75	3+02.56	654608.92	7653020.96			200.00'	5.00'	1°25'59"	5.00'	N20°59'50"W
3+02.56	654608.92	7653020.96	3+35.91	654632.78	7652998.75			45.00'	33.35'	42°27'43"	32.59'	N42°56'41"W
3+35.91	654632.78	7652998.75	7+80.00	654826.23	7652599.01	N64°10'33"W	444.09'					

HORIZONTAL ALIGNMENT DATA
ALIGNMENT: RD-SS-CONN
2 NONE

WALL-WALK												
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD LENGTH	CHORD BEARING
0+00.00	654431.32	7652937.97	0+38.63	654435.70	7652899.59	N83°29'45"W	38.63'					
0+38.63	654435.70	7652899.59	1+39.72	654376.05	7652832.79			60.00'	101.09'	96°32'08"	89.55'	S48°14'11"W
1+39.72	654376.05	7652832.79	1+44.75	654371.02	7652832.79	S0°01'53"E	5.03'					
1+44.75	654371.02	7652832.79	1+98.62	654323.90	7652855.10			61.00'	53.87'	50°36'03"	52.14'	S25°19'54"E
1+98.62	654323.90	7652855.10	2+46.99	654293.21	7652892.50	S50°37'56"E	48.37'					

HORIZONTAL ALIGNMENT DATA
ALIGNMENT: WALL-WALK
3 NONE

WES EXIT - RT												
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD LENGTH	CHORD BEARING
0+00.00	654551.23	7653051.43	0+46.18	654597.41	7653051.94	N0°38'24"E	46.18'					
0+46.18	654597.41	7653051.94	0+57.37	654608.55	7653051.18			70.00'	11.19'	9°09'25"	11.18'	N3°56'17"W
0+57.37	654608.55	7653051.18	0+82.27	654633.12	7653047.09			765.99'	24.90'	1°51'45"	24.90'	N9°26'52"W
0+82.27	654633.12	7653047.09	1+12.40	654661.42	7653054.30			35.00'	30.13'	49°19'29"	29.21'	N14°16'59"E
1+12.40	654661.42	7653054.30	1+19.89	654665.04	7653060.66			10.00'	7.49'	42°56'16"	7.32'	N60°24'52"E
1+19.89	654665.04	7653060.66	1+40.00	654667.88	7653080.56	N81°53'00"E	20.11'					

HORIZONTAL ALIGNMENT DATA
ALIGNMENT: WES EXIT EAST WALL
4 NONE

WES EXIT - LT												
STARTING STATION	START NORTHING	START EASTING	ENDING STATION	END NORTHING	END EASTING	BEARING	DISTANCE	RADIUS	ARC LENGTH	DELTA	CHORD LENGTH	CHORD BEARING
0+00.00	654551.41	7653035.43	0+46.18	654597.58	7653035.94	N0°38'24"E	46.18'					
0+46.18	654597.58	7653035.94	0+54.81	654606.19	7653035.35			54.00'	8.63'	9°09'25"	8.62'	N3°56'17"W
0+54.81	654606.19	7653035.35	0+91.06	654641.89	7653029.12			750.00'	36.25'	2°46'09"	36.24'	N9°54'04"W
0+91.06	654641.89	7653029.12	1+10.39	654660.80	7653025.09			750.00'	19.33'	1°28'37"	19.33'	N12°01'27"W
1+10.39	654660.80	7653025.09	1+68.21	654703.18	7653054.29			35.00'	57.82'	94°38'46"	51.46'	



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE		APPROVAL DATE	
DEPARTMENT	SIGNATURE		
CITY LANDSCAPE ARCHITECT			
COMMUNITY DEVELOPMENT			
PUBLIC WORKS			

PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
LANDSCAPE IRRIGATION PLAN
SHEET 2

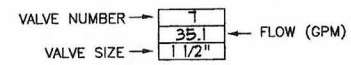
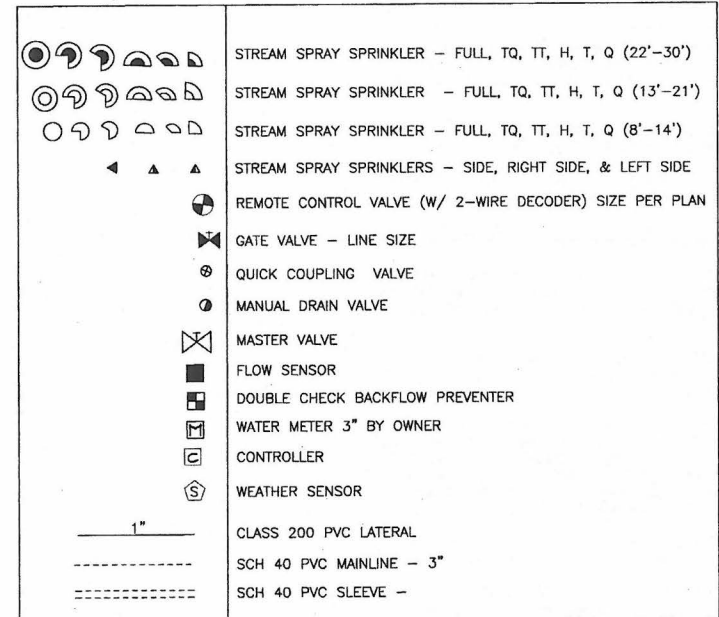
NO.	DATE	REVISION BY

REGISTERED
383
David P. Williams
RAYMOND GILL WILLIAMS III
OREGON
11/07/97
LANDSCAPE ARCHITECT

SCALE: AS SHOWN
DATE: 4-1-2014
DRN. BAR
CK. BXM

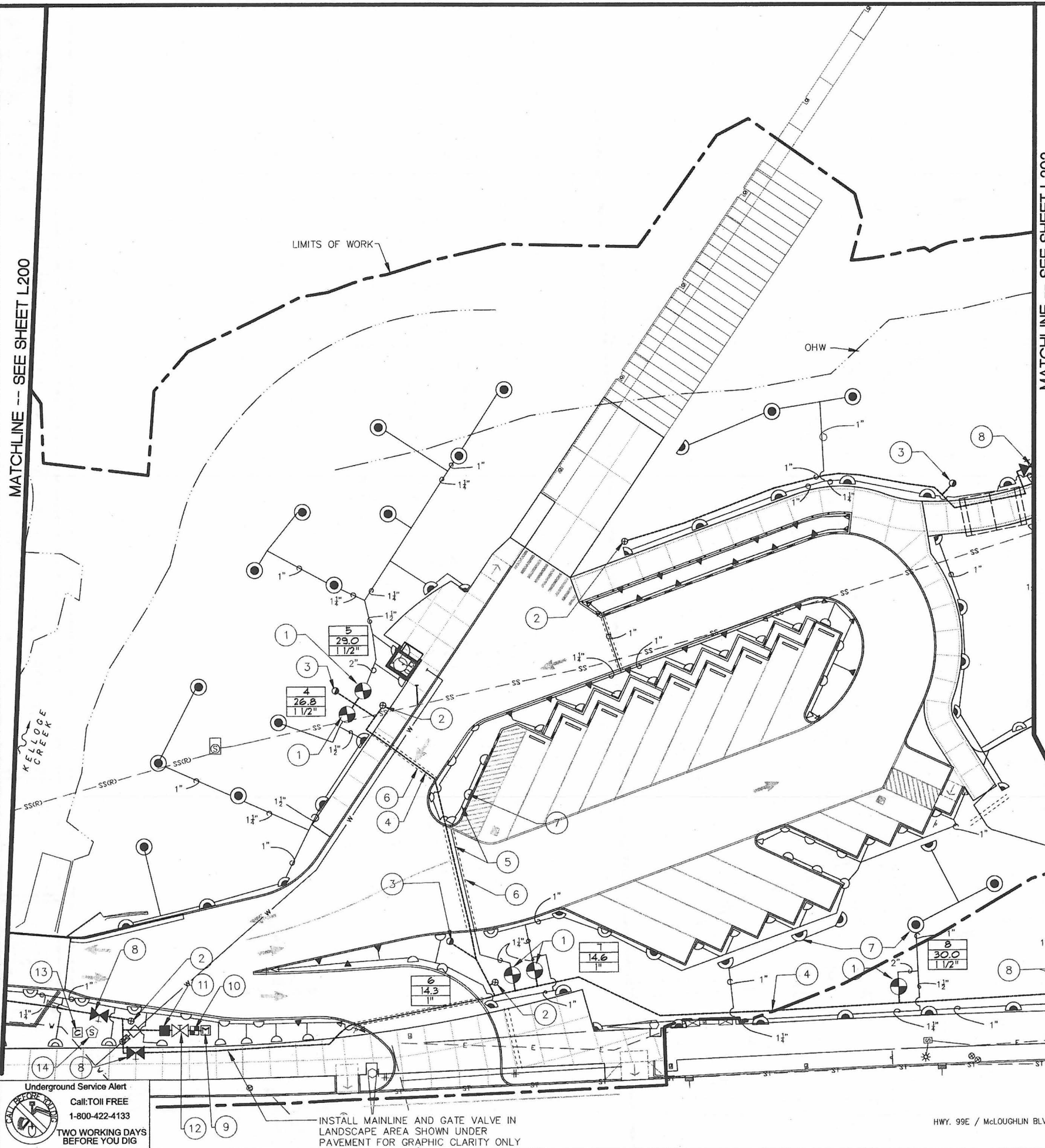
L201
JOB NO. MAEX0000-0021

IRRIGATION KEY



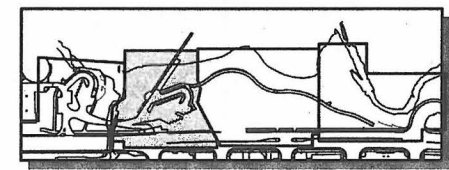
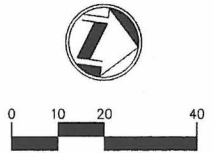
KEYNOTES

- 1 INSTALL REMOTE CONTROL VALVE SEE DETAIL 1, SHEET L204
- 2 INSTALL QUICK COUPLING VALVE SEE DETAIL 5, SHEET L204
- 3 INSTALL MANUAL DRAIN VALVE SEE DETAIL 2, SHEET L204
- 4 INSTALL SCH 40 PVC MAINLINE SEE DETAIL 5, SHEET L205
- 5 INSTALL CLASS 200 PVC LATERAL LINE SEE DETAIL 8, SHEET L205
- 6 INSTALL SCH 40 PVC SLEEVE SEE DETAIL 6, SHEET L205
- 7 INSTALL STREAM SPRAY SPRINKLERS SEE DETAIL 4, SHEET L204
- 8 INSTALL GATE VALVE SEE DETAIL 3, SHEET L204
- 9 INSTALL DEDUCT METER - 1 1/2"
- 10 INSTALL BACKFLOW PREVENTER SEE DETAILS 2 & 5, SHEET L205
- 11 INSTALL FLOW SENSOR SEE DETAIL 3, SHEET L205
- 12 INSTALL MASTER VALVE SEE DETAIL 3, SHEET L205
- 13 INSTALL CONTROLLER (IN STAINLESS PEDESTAL CABINET) SEE DETAIL 1, SHEET L205
- 14 INSTALL WEATHER SENSOR
- 15 CAP MAINLINE



MATCHLINE -- SEE SHEET L200

MATCHLINE -- SEE SHEET L202



KEY MAP
NOT TO SCALE

Underground Service Alert
Call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS
BEFORE YOU DIG

INSTALL MAINLINE AND GATE VALVE IN
LANDSCAPE AREA SHOWN UNDER
PAVEMENT FOR GRAPHIC CLARITY ONLY

HWY. 99E / McLOUGHLIN BLVD

Drawing File: \Projects\MAEX00000021\0400CAD\021\0400CAD\021\0400CAD\021-IRRIG.dwg Date/Time: Apr 01, 2014 - 3:23pm User: scb



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CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: LANDSCAPE IRRIGATION PLAN
SHEET 3

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: BAR
CK: BXM

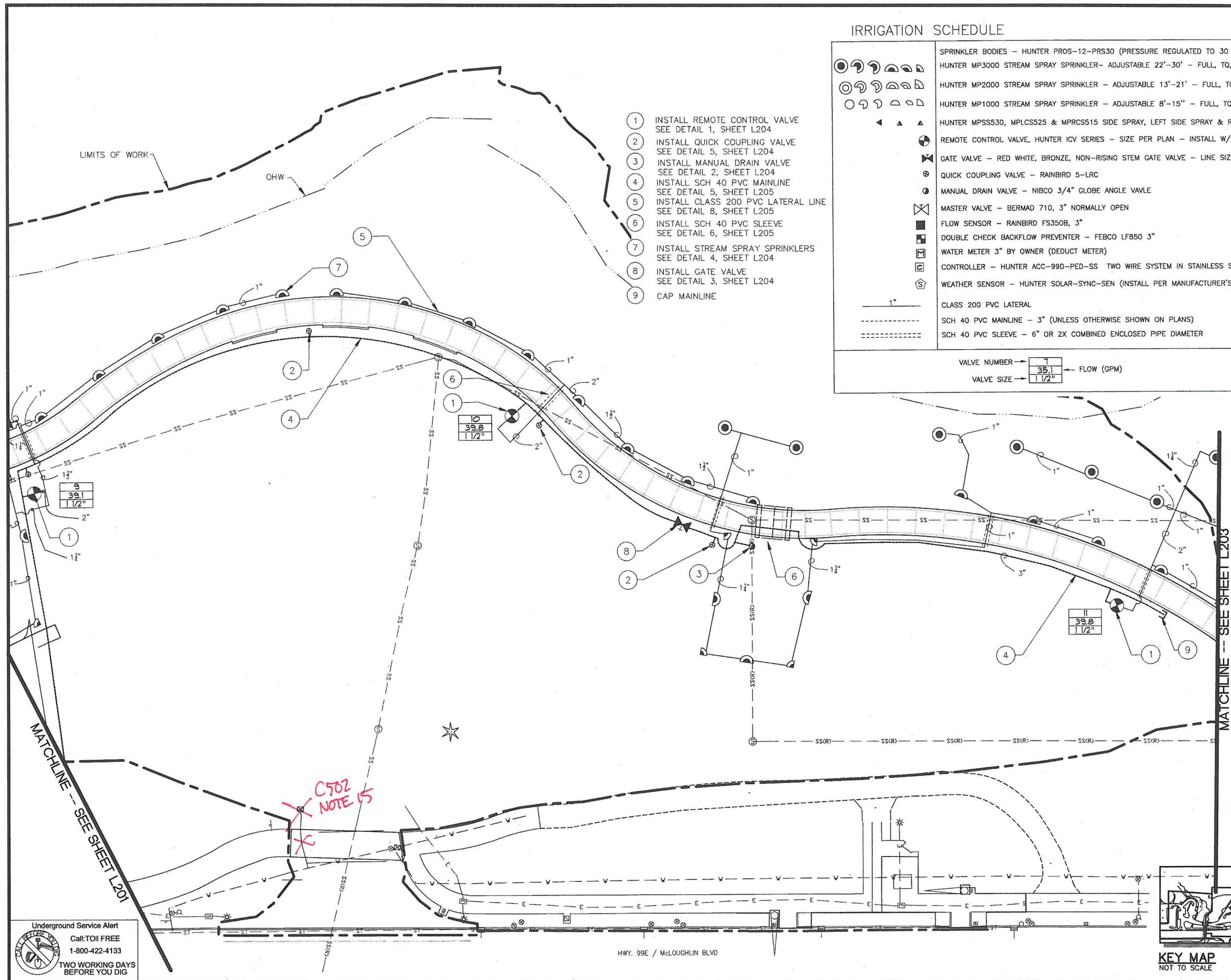
L202
JOB NO. MAEX0000-0021

IRRIGATION SCHEDULE

	SPRINKLER BODIES - HUNTER PROS-12-PRS30 (PRESSURE REGULATED TO 30 PSI WITH 12" POP HT.)
	HUNTER MP3000 STREAM SPRAY SPRINKLER- ADJUSTABLE 22'-30' - FULL, TQ, TT, H, T, Q
	HUNTER MP2000 STREAM SPRAY SPRINKLER - ADJUSTABLE 13'-21' - FULL, TQ, TT, H, T, Q
	HUNTER MP1000 STREAM SPRAY SPRINKLER - ADJUSTABLE 8'-15" - FULL, TQ, TT, H, T, Q
	HUNTER MPSS530, MPLCS525 & MPRCS515 SIDE SPRAY, LEFT SIDE SPRAY & RIGHT SIDE SPRAY
	REMOTE CONTROL VALVE, HUNTER ICV SERIES - SIZE PER PLAN - INSTALL W/ 2-WIRE DECODER
	GATE VALVE - RED WHITE, BRONZE, NON-RISING STEM GATE VALVE - LINE SIZE
	QUICK COUPLING VALVE - RAINBIRD 5-LRC
	MANUAL DRAIN VALVE - NIBCO 3/4" GLOBE ANGLE VALVE
	MASTER VALVE - BERMAD 710, 3" NORMALLY OPEN
	FLOW SENSOR - RAINBIRD FS350B, 3"
	DOUBLE CHECK BACKFLOW PREVENTER - FEBCO LF850 3"
	WATER METER 3" BY OWNER (DEDUCT METER)
	CONTROLLER - HUNTER ACC-99D-PED-SS TWO WIRE SYSTEM IN STAINLESS STEEL PEDESTAL CABINET
	WEATHER SENSOR - HUNTER SOLAR-SYNC-SEN (INSTALL PER MANUFACTURER'S RECOMMENDATION)
	CLASS 200 PVC LATERAL
	SCH 40 PVC MAINLINE - 3" (UNLESS OTHERWISE SHOWN ON PLANS)
	SCH 40 PVC SLEEVE - 6" OR 2X COMBINED ENCLOSED PIPE DIAMETER

VALVE NUMBER	7	FLOW (GPM)
VALVE SIZE	39.8	1 1/2"

- 1 INSTALL REMOTE CONTROL VALVE SEE DETAIL 1, SHEET L204
- 2 INSTALL QUICK COUPLING VALVE SEE DETAIL 5, SHEET L204
- 3 INSTALL MANUAL DRAIN VALVE SEE DETAIL 2, SHEET L204
- 4 INSTALL SCH 40 PVC MAINLINE SEE DETAIL 5, SHEET L205
- 5 INSTALL CLASS 200 PVC LATERAL LINE SEE DETAIL 8, SHEET L205
- 6 INSTALL SCH 40 PVC SLEEVE SEE DETAIL 6, SHEET L205
- 7 INSTALL STREAM SPRAY SPRINKLERS SEE DETAIL 4, SHEET L204
- 8 INSTALL GATE VALVE SEE DETAIL 3, SHEET L204
- 9 CAP MAINLINE



Underground Service Alert
Call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

HWY. 99E / McLOUGHLIN BLVD

KEY MAP
NOT TO SCALE

Drawing File: \\Projects\Project\MAEX000002\PROJECT\WORKSHEETS\L202-MAEX21-IRR.dwg Date/Time: Apr 01, 2014 - 3:25pm User: adh



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CITY OF MILWAUKIE		APPROVAL DATE	
DEPARTMENT	SIGNATURE		
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COMMUNITY DEVELOPMENT			
PUBLIC WORKS			

PROJECT
**MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY**
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
**LANDSCAPE IRRIGATION PLAN
SHEET 4**

NO.	DATE	REVISION	BY

REGISTERED
383
Raymond Gill Williams III
RAYMOND GILL WILLIAMS III
OREGON
11/07/97
LANDSCAPE ARCHITECT

SCALE: AS SHOWN
DATE: 4-1-2014
DRN: BAR
CK: BXM

L203
JOB NO. MAEX0000-0021

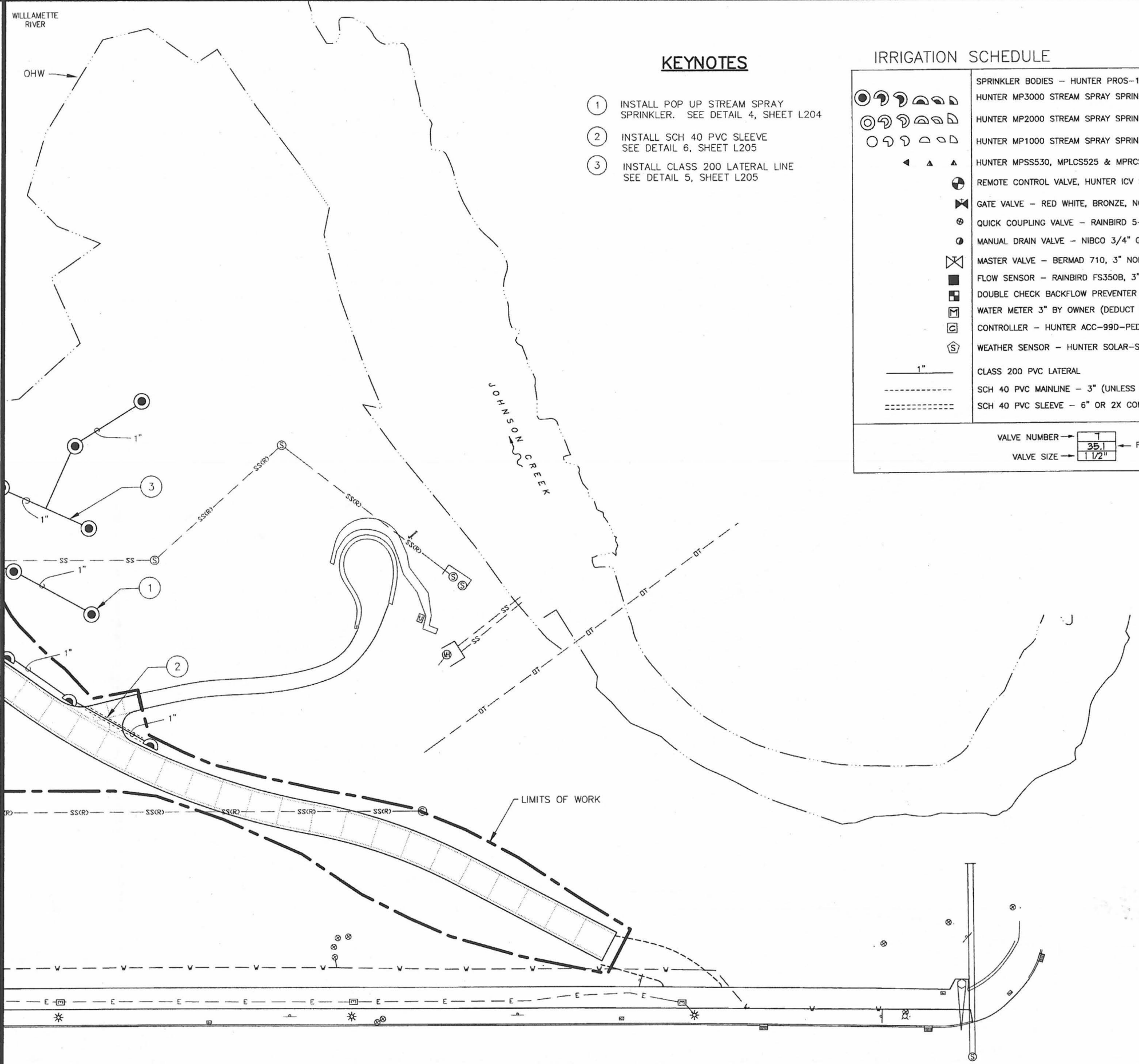
KEYNOTES

- 1 INSTALL POP UP STREAM SPRAY SPRINKLER. SEE DETAIL 4, SHEET L204
- 2 INSTALL SCH 40 PVC SLEEVE SEE DETAIL 6, SHEET L205
- 3 INSTALL CLASS 200 LATERAL LINE SEE DETAIL 5, SHEET L205

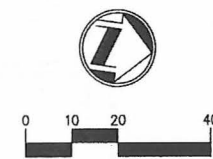
IRRIGATION SCHEDULE

	SPRINKLER BODIES - HUNTER PROS-12-PRS30 (PRESSURE REGULATED TO 30 PSI WITH 12" POP HT. HUNTER MP3000 STREAM SPRAY SPRINKLER- ADJUSTABLE 22'-30' - FULL, TQ, TT, H, T, Q
	HUNTER MP2000 STREAM SPRAY SPRINKLER - ADJUSTABLE 13'-21' - FULL, TQ, TT, H, T, Q
	HUNTER MP1000 STREAM SPRAY SPRINKLER - ADJUSTABLE 8'-15" - FULL, TQ, TT, H, T, Q
	HUNTER MPSS530, MPLCS525 & MPRCS515 SIDE SPRAY, LEFT SIDE SPRAY & RIGHT SIDE SPRAY
	REMOTE CONTROL VALVE, HUNTER ICV SERIES - SIZE PER PLAN - INSTALL W/ 2-WIRE DECODER
	GATE VALVE - RED WHITE, BRONZE, NON-RISING STEM GATE VALVE - LINE SIZE
	QUICK COUPLING VALVE - RAINBIRD 5-LRC
	MANUAL DRAIN VALVE - NIBCO 3/4" GLOBE ANGLE VALVE
	MASTER VALVE - BERMAD 710, 3" NORMALLY OPEN
	FLOW SENSOR - RAINBIRD FS350B, 3"
	DOUBLE CHECK BACKFLOW PREVENTER - FEBCO LF850 3"
	WATER METER 3" BY OWNER (DEDUCT METER)
	CONTROLLER - HUNTER ACC-99D-PED-SS TWO WIRE SYSTEM IN STAINLESS STEEL PEDESTAL CABINET
	WEATHER SENSOR - HUNTER SOLAR-SYNC-SEN (INSTALL PER MANUFACTURER'S RECOMMENDATION)
	CLASS 200 PVC LATERAL
	SCH 40 PVC MAINLINE - 3" (UNLESS OTHERWISE SHOWN ON PLANS)
	SCH 40 PVC SLEEVE - 6" OR 2X COMBINED ENCLOSED PIPE DIAMETER

VALVE NUMBER	<table border="1"><tr><td>1</td></tr><tr><td>35.1</td></tr></table>	1	35.1	FLOW (GPM)
1				
35.1				
VALVE SIZE	<table border="1"><tr><td>1 1/2"</td></tr></table>	1 1/2"		
1 1/2"				

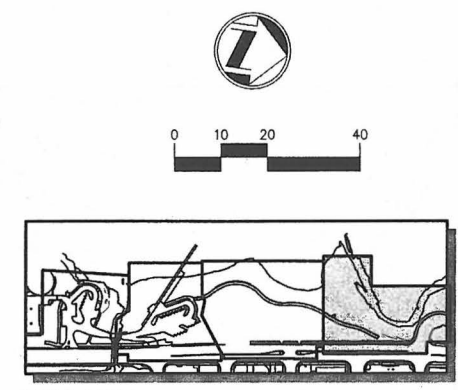


MATCHLINE -- SEE SHEET L302



Underground Service Alert
Call: TOI FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

HWY. 99E / McLOUGHLIN BLVD



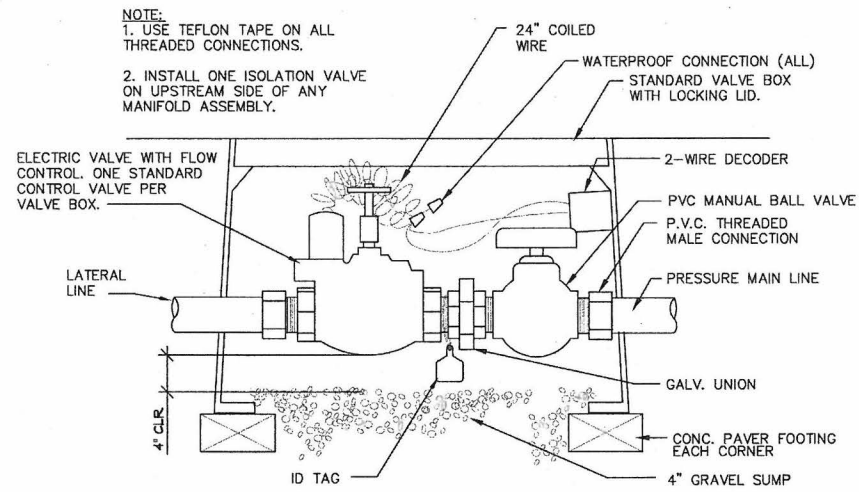
KEY MAP
NOT TO SCALE

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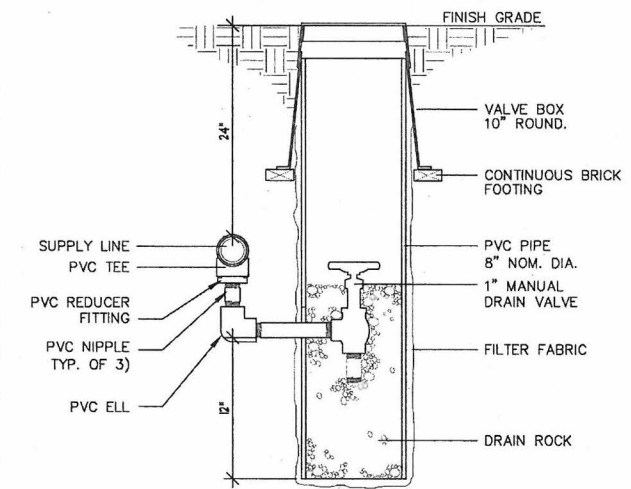
IRRIGATION SCHEDULE

	SPRINKLER BODIES - HUNTER PROS-12-PRS30 (PRESSURE REGULATED TO 30 PSI WITH 12" POP HT.)
	HUNTER MP3000 STREAM SPRAY SPRINKLER - ADJUSTABLE 22'-30' - FULL, TQ, TT, H, T, Q
	HUNTER MP2000 STREAM SPRAY SPRINKLER - ADJUSTABLE 13'-21' - FULL, TQ, TT, H, T, Q
	HUNTER MP1000 STREAM SPRAY SPRINKLER - ADJUSTABLE 8'-15" - FULL, TQ, TT, H, T, Q
	HUNTER MPSS530, MPLCS525 & MPRCS515 SIDE SPRAY, LEFT SIDE SPRAY & RIGHT SIDE SPRAY
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	WEATHER SENSOR - HUNTER SOLAR-SYNC-SEN (INSTALL PER MANUFACTURER'S RECOMMENDATION)
	CLASS 200 PVC LATERAL
	SCH 40 PVC MAINLINE - 3" (UNLESS OTHERWISE SHOWN ON PLANS)
	SCH 40 PVC SLEEVE - 6" OR 2X COMBINED ENCLOSED PIPE DIAMETER

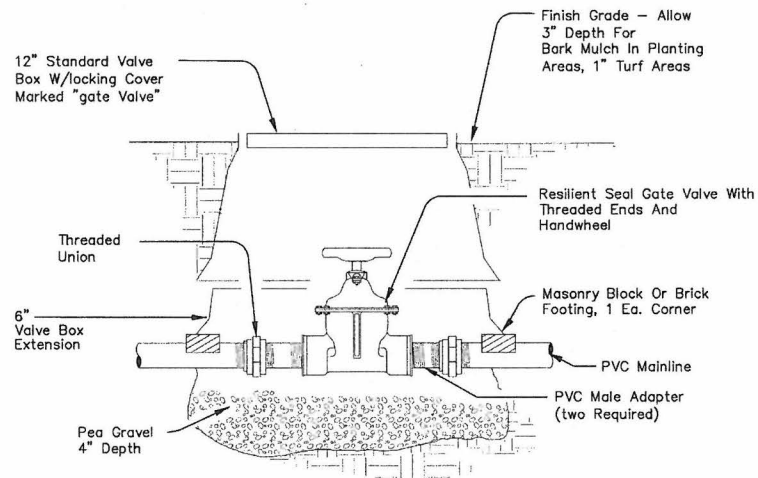
VALVE NUMBER	7	FLOW (GPM)
VALVE SIZE	3/4"	



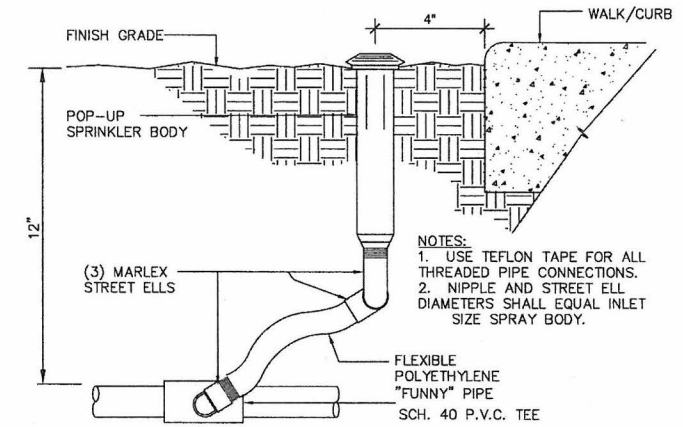
1 REMOTE CONTROL VALVE
NTS



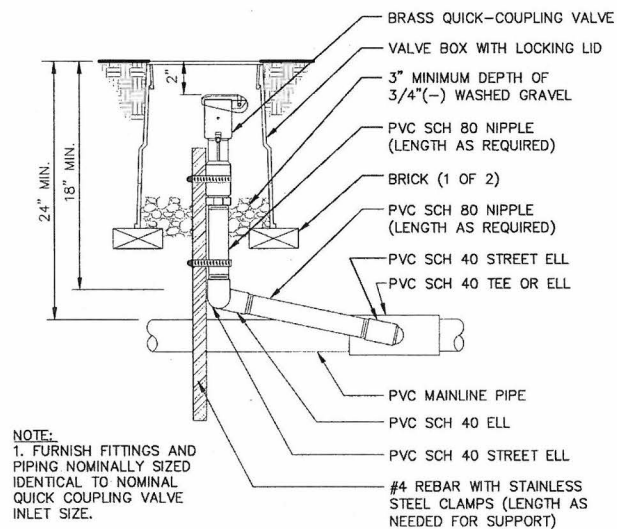
2 MANUAL DRAIN VALVE
NTS



3 GATE VALVE
NTS



4 POP-UP STREAM SPRAY SPRINKLER
NTS



5 QUICK COUPLING VALVE
NTS

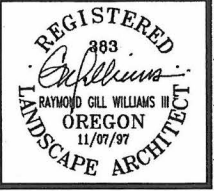


2100 SW River Parkway
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Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE	DEPARTMENT	CITY LANDSCAPE ARCHITECT
	PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SIGNATURE	APPROVAL DATE	
	PUBLIC WORKS	

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	LANDSCAPE IRRIGATION DETAILS

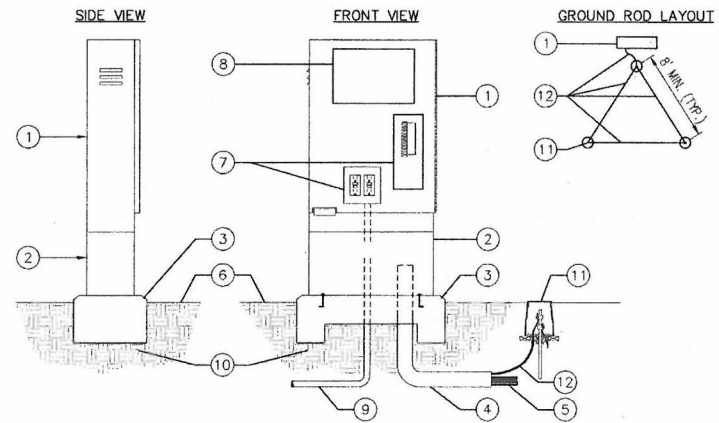
NO.	DATE	REVISION	BY



SCALE:	AS SHOWN
DATE:	4-1-2014
DRN.	BAR
CK.	BXM

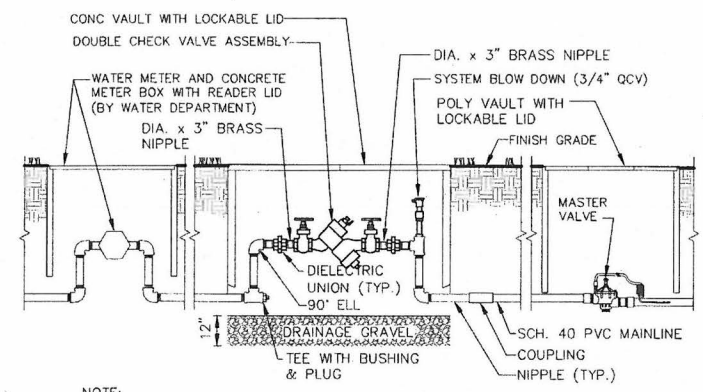
L204
JOB NO. MAEX0000-0021

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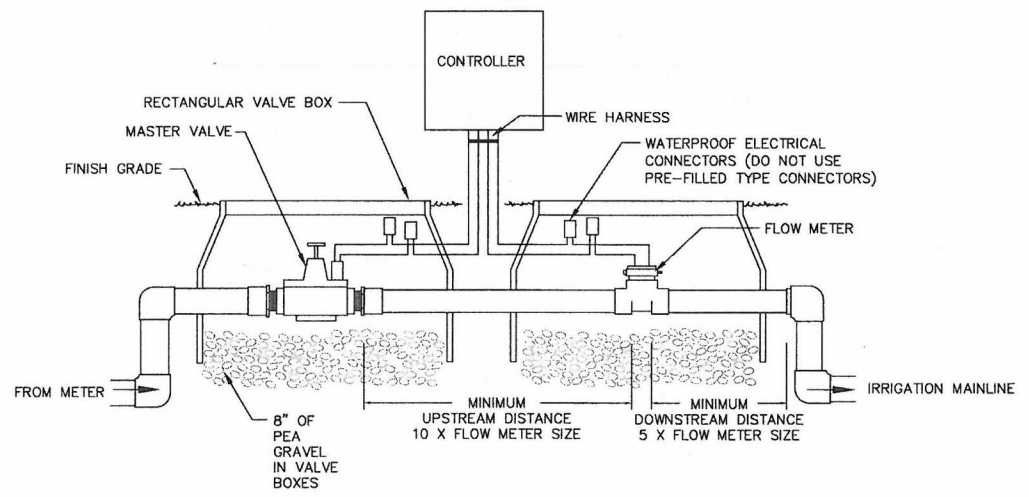
- LEGEND**
1. CONTROLLER ENCLOSURE.
 2. ENCLOSURE PEDESTAL.
 3. PRE-MANUFACTURED OR CAST IN PLACE CONCRETE BASE.
 4. PVC LONG SWEEP ELL - USE ONE SWEEP ELL PER CONTROLLER.
 5. DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES.
 6. FINISH GRADE.
 7. CONTROLLER SUB-ASSEMBLY (CSA) INCLUDES GFI & TERMINAL STRIPS WITH PLACARDS.
 8. AUTOMATIC CONTROLLER.
 9. 120-VOLT SERVICE IN CONDUIT.
 10. COMPACTED SUBGRADE.
 11. GROUNDING GRID W/ 6" ROUND VALVE BOX (TYP. OF 3). USE 8' COPPER CLAD GROUND ROD W/ SEPERATE WIRE CLAMPS FOR EACH GROUND WIRE.
 12. BARE COPPER GROUND WIRE 10-1 MINIMUM.
- NOTE:**
1. GROUND WIRE FROM EQUIPMENT TO FIRST ROD SHOULD BE AS SHORT AND STRAIGHT AS POSSIBLE.
 2. IF CONTROLLER IS TO BE LOCATED NEAR A SLOPED AREA, INSTALL AT TOP OF SLOPE.
 3. INSTALL ALL COMPONENTS PER MANUFACTURER SPECIFICATIONS. AND PER CODE

1 CONTROLLER
NTS

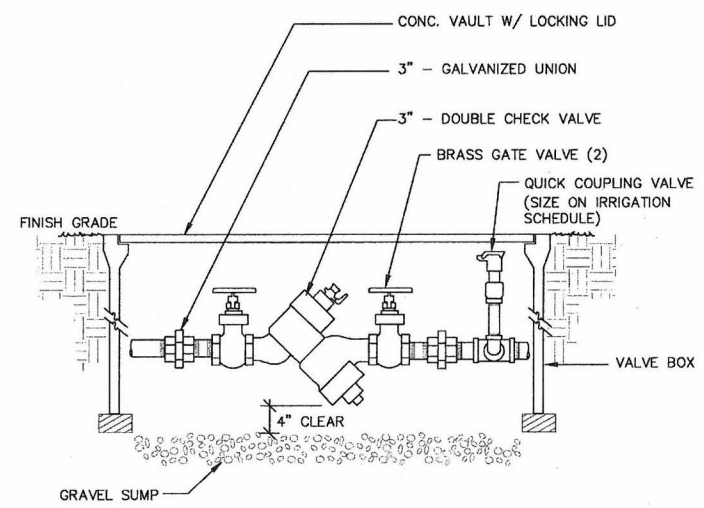


NOTE:
 1. ALL FITTINGS AND NIPPLES SHALL BE SCH. 80 PVC OR BRASS; SIZE AND LENGTH AS REQUIRED OR AS NOTED.

2 DOUBLE CHECK VALVE ASSEMBLY SCHEMATIC
NTS

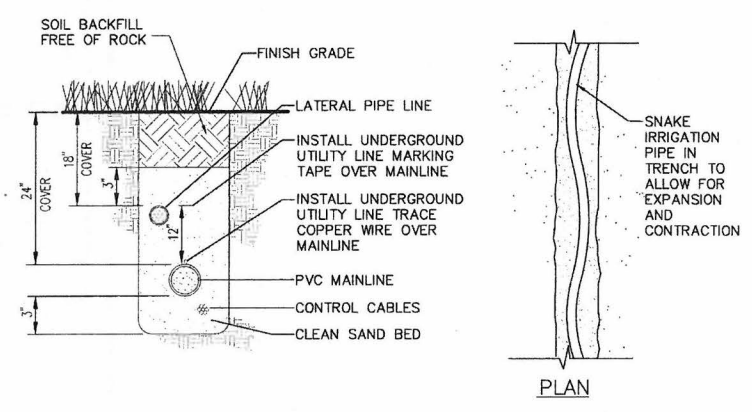


3 FLOW SENSOR & MASTER VALVE SCHEMATIC
NTS

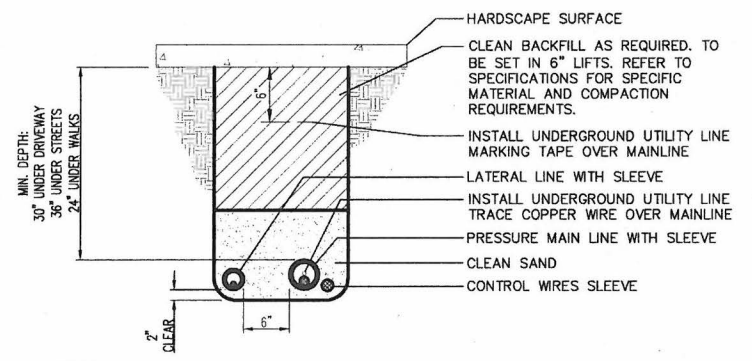


- NOTE:**
- APPROVED DOUBLE CHECK VALVE ASSEMBLY TO LAY HORIZONTAL WITH GROUND.
 - DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
 - TEST COCKS TO EITHER FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
 - THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
 - THE DCVA MAY BE INSTALLED ABOVE OR BELOW THE GROUND PROVIDED ALL CLEARANCES ARE MET
 - DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
 - MUST BE ACCESSIBLE.
 - MUST BE PROTECTED FROM FREEZING CONDITIONS.
 - THE BACKFLOW ASSEMBLY SHALL BE A STATE APPROVED MODEL.
 - A PLUMBING PERMIT IS REQUIRED- PLEASE CONTACT YOUR LOCAL PLUMBING PERMIT CENTER.
 - MUST BE TESTED AFTER INSTALLATION AND YEARLY THEREAFTER BY A OREGON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF MILWAUKIE WATER DEPARTMENT.

4 DOUBLE CHECK BACKFLOW PREVENTER (BELOW GROUND INSTALLATION)
NTS

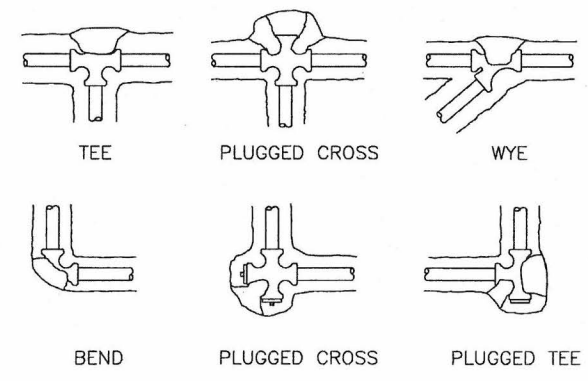
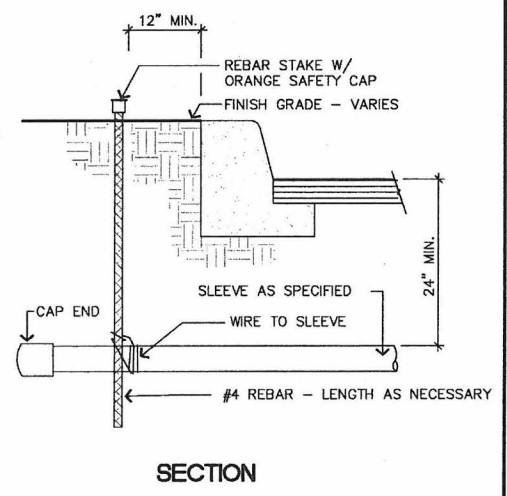


5 TRENCH CONSTRUCTION
1" = 1'-0"



- NOTES:**
1. ALL SLEEVES TO BE PVC. SCH. 40 AND TWICE THE DIAMETER OF THE WORKING PIPE.
 2. ALL SLEEVES TO RUN A MIN. OF 12" BEYOND HARDSCAPE EDGES.
 3. CLEAN BACKFILL MAY BE SUBSTITUTED FOR SAND UNDER WALKS AND DRIVES.

6 IRRIGATION SLEEVING
NTS



7 CONCRETE THRUST BLOCKS
NTS



2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE	DEPARTMENT	CITY LANDSCAPE ARCHITECT
	ARCHITECT	COMMUNITY DEVELOPMENT
SIGNATURE	APPROVAL DATE	PUBLIC WORKS

MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK
 SHEET TITLE
LANDSCAPE IRRIGATION DETAILS

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
 DATE: 4-1-2014
 DRN. BXM
 CK. BXM

L205
 JOB NO. MAEX0000-0021

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
 SHEET TITLE: LANDSCAPE IRRIGATION DETAILS
 Date/Time: Apr 01, 2014 - 3:25pm User: sdh



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Fax: 503.223.2701

CITY OF MILWAUKIE	DEPARTMENT	SIGNATURE	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: LANDSCAPE PLANTING SCHEDULE

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN: BAR
CK: BXM

L300
JOB NO. MAEX0000-0021

PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QUANTITY	CONDITION	SPACING
	ACER MACROPHYLLUM	BIGLEAF MAPLE	2	1 1/2" CAL. B&B	AS SHOWN
	ACER RUBRA 'SUNSET'	SUNSET RED MAPLE	6	2" CAL. B&B	AS SHOWN
	ALNUS RUBRA	RED ALDER	37	1 1/2" CAL. B&B	AS SHOWN
	CORNUS 'EDDIE'S WHITE WONDER'	EDDIE'S WHITE WONDER DOGWOOD	11	2" CAL. B&B	AS SHOWN
	FRAXINUS LATIFOLIA	OREGON ASH	14	1 1/2" CAL. B&B	AS SHOWN
	LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE'	SLENDER SILHOUETTE AMER. SWEETGUM	15	1 1/2" CAL. B&B	AS SHOWN
	NYSSA SYLVATICA	BLACK TUPELO	16	2" CAL. B&B	AS SHOWN
	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	4	6" HT., B&B	AS SHOWN
	PYRUS CALLERYANA SPP.	FLOWERING CHANTICLEER PEAR	11	2" CAL. B&B	AS SHOWN
	QUERCUS GARRYANA	OREGON WHITE OAK	5	1 1/2" CAL. B&B	AS SHOWN
	SALIX SITCHENSIS	SITKA WILLOW	43	NO. 5 CONT.	AS SHOWN
	SALIX SCOULERIANA	SCOULER'S WILLOW	20	NO. 5 CONT.	AS SHOWN
	SEQUOIA SEMPERVIRENS	REDWOOD	2	10' HT., B&B	AS SHOWN
SHRUBS					
	ACER CIRCINATUM	VINE MAPLE	11	NO. 5 CONT.	AS SHOWN
	AMELANCHIER ALNIFOLIA 'REGENT'	DWARF SERVICEBERRY	8	NO. 2 CONT.	AS SHOWN
	ANDROMEDA POLIFOLIA	BOG ANDROMEDA	30	NO. 1 CONT.	AS SHOWN
	AZALEA 'KLONDYKE'	YELLOW-ORANGE DECID. AZALEA	33	NO. 1 CONT.	AS SHOWN
	CALLUNA V. 'MELANIE'	MELANIE WHITE HEATHER	37	NO. 1 CONT.	AS SHOWN
	CALLUNA 'DARK BEAUTY'	'DARK BEAUTY' HEATHER	80	NO. 1 CONT.	AS SHOWN
	CALLUNA 'ROBERT CHAPMAN'	HEATHER 'ROBERT CHAPMAN'	180	NO. 2 CONT.	AS SHOWN
	CAREX ELATA	TUFTED SEDGE	28	NO. 2 CONT.	AS SHOWN
	CORYLUS CORNUTA	WESTERN HAZELNUT	61	NO. 1 CONT.	AS SHOWN
	CORNUS SERICEA 'CARDINAL'	CARDINAL REDTWIG DOGWOOD	68	NO. 1 CONT.	AS SHOWN
	CORNUS SERICEA 'KELSEY'	KELSEY DWARF REDTWIG DOGWOOD	24	NO. 2 CONT.	AS SHOWN
	DISANTHUS CERCIDIPHYLLUM	DISANTHUS	16	NO. 1 CONT.	AS SHOWN
	ERICA CARNEA 'RUBY GLOW'	RUBY GLOW HEATH	17	NO. 1 CONT.	AS SHOWN
	GARRYA ELIPTICA	SILK TASSEL	10	NO. 2 CONT.	AS SHOWN
	HETEROMELES ARBUTIFOLIA	TOYON	34	NO. 1 CONT.	AS SHOWN
	HOLODISCUS DISCOLOR	OCEANSPRAY	48	NO. 2 CONT.	AS SHOWN
	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	66	NO. 2 CONT.	AS SHOWN
	PHILADELPHUS 'MINNESOTA SNOWFLAKE'	DWARF MOCK ORANGE	48	NO. 1 CONT.	AS SHOWN
	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	23	NO. 2 CONT.	AS SHOWN
	RIBES SANGUINEUM	RED FLOWERING CURRANT	3	NO. 5 CONT.	AS SHOWN
	RHODODENDRON AUGUSTINII	BLUE RHODODENDRON	3	NO. 5 CONT.	AS SHOWN
	RHODODENDRON LUTESCENS	YELLOW RHODODENDRON	40	NO. 2 CONT.	AS SHOWN
	ROSA RUGOSA 'JACRULAV'	DEEP PINKISH-RED JAPAN. ROSE	82	NO. 1 CONT.	AS SHOWN
	SPIRAEA x BUMALDI 'MONHUD'	GOLDEN SUNRISE SPIRAEA	46	NO. 1 CONT.	AS SHOWN
	SYMPHORICARPOS ALBUS	SNOWBERRY	111	NO. 2 CONT.	AS SHOWN
	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	23	NO. 2 CONT.	AS SHOWN
	VACCINIUM 'CHIPPEWA'	CHIPPEWA EDIBLE BLUEBERRY			

GROUNDCOVERS	BOTANICAL NAME	COMMON NAME	QUANTITY	CONDITION	SPACING
RIPARIAN NATIVES					
	CAREX OBNUPTA	SLOUGH SEDGE	406	BARE ROOT	15" O.C.
	CORNUS SERICEA 'KELSEYI'	DWARF REDTWIG DOGWOOD	272	1 GAL CONTAINER	24" O.C.
	DESCHAMPSIA CAESPITOSA	TUFTED HAIRGRASS	1,011	BARE ROOT	15" O.C.
	GAULTHERIA SHALLON	SALAL	60	1 GAL CONTAINER	24" O.C.
	MAHONIA REPENS	CREEPING MAHONIA	834	1 GAL CONTAINER	24" O.C.
	PHYSOCARPUS OPULIFOLIUS 'SMPOTW'	'TINY WINE' NINEBARK	521	1 GAL CONTAINER	24" O.C.
	SPIRAEA DOUGLASII	HARD HACK	676	1 GAL CONTAINER	24" O.C.
UPLAND					
	ROSA NUTKANA/SYMPHORICARPOS	NUTKA ROSE+SNOWBERRY	516 OF EA.	1 GAL CONTAINER	24" O.C.
	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	764	1 GAL CONTAINER	24" O.C.
	IRIS DOUGLASIANA/IRIS ENSATA	DOUGLAS IRIS/JAPANESE IRIS	368	RHIZOME/BULB	15" O.C.
	DICENTRA FORMOSA	WESTERN BLEEDINGHEART	100	BARE ROOT	24" O.C.
	JUNCUS EFFUSUS	SOFT RUSH	871	BARE ROOT	15" O.C.

SEED MIXES

	BOTANICAL NAME / COMMON NAME	% BY COMPOSITION	PLS APPLICATION RATE*	QUANTITY
SEED MIX 1 LAWN AREAS	LOLIUM PERENNE 'CELEBRATION' / CELEBRATION PERENNIAL RYEGRASS	60%	212	107,855 SF (2.5 ACRES)
	FESTUCA RUBRA SPP. COMMUTATA / SILHOUETTE CHEWINGS FESCUE	20%	35	
	FESTUCA RUBRA 'GIBRALTER' / GIBRALTER CREEPING FESCUE	20%	75	
SEED MIX 2 NATIVE UPLANDS	LOLIUM / ANNUAL RYEGRASS	24%	32	6,727 SF (0.15 AC)
	FESTUCA OVINA / SHEEP FESCUE	24%	11	
	FESTUCA RUBRA 'RUBRA' / NATIVE RED FESCUE	24%	13	
	BROMUS CARINATUS / CALIFORNIA BROME	24%	72	
	AQUILEGIA FORMOSA / RED COLUMBINE	4%	2	
SEED MIX 3 RIPARIAN MIX	BROMUS VULGARIS / COLUMBIA BROME	5%	6	21,824 SF
	CAREX DEWEYANA / DEWEY SEDGE	10%	4	
	CAREX OBNUPTA / SLOUGH SEDGE	10%	4	
	FESTUCA RUBRA VAR. RUBRA / NATIVE RED FESCUE	60%	20	
	JUNCUS TENUIS / SLENDER RUSH	10%	0.11	
	GLYCERIA ELATA / TALL MANNAGRASS	5%	4	

*LBS OF PURE LIVE SEED (PLS) PER ACRE

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CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	DEPARTMENT	
CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
LANDSCAPE PLANTING PLAN
SHEET 1

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN. BAR
CK. BXM

L301
JOB NO. MAEX0000-002

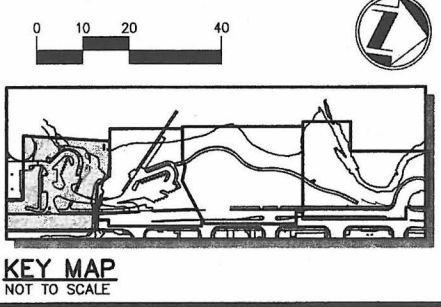
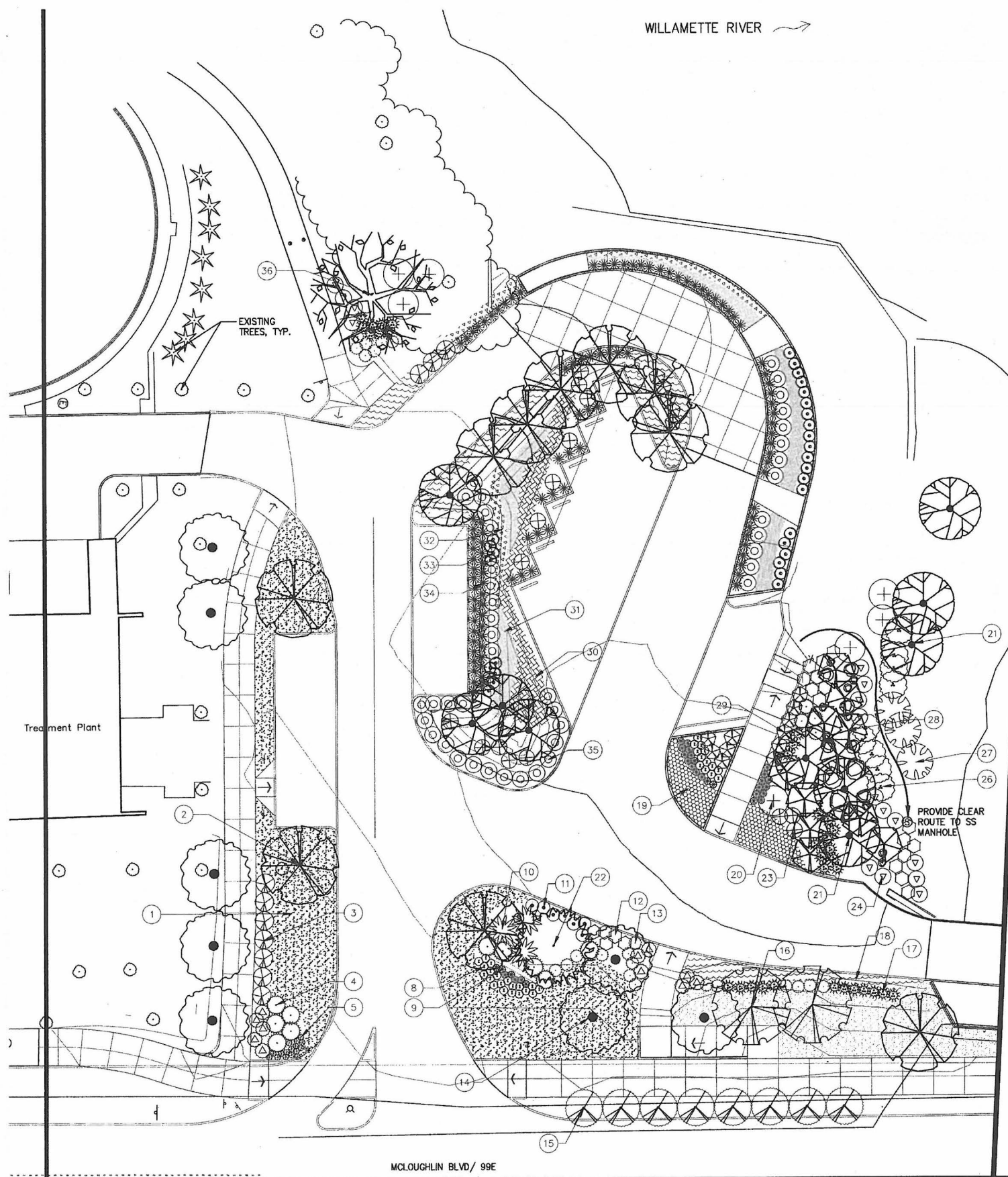
PLANTING KEYNOTES

- 1 SEED WITH SEED MIX NO. 1, LAWN
- 2 INSTALL TREE, NYSSA SYLVATICA
- 3 INSTALL SHRUB, BLUEBERRY
- 4 INSTALL SHRUB, DISANTHUS
- 5 INSTALL SHRUB, RUBY GLOW HEATH
- 6 NOT USED
- 7 NOT USED
- 8 INSTALL SHRUB, WHITE HEATHER
- 9 INSTALL SHRUB, 'DARK BEAUTY' HEATHER
- 10 INSTALL SHRUB, BLUE RHODODENDRON
- 11 INSTALL SHRUB, AZALEA 'KLONDYKE'
- 12 INSTALL SHRUB, DWARF MOCK ORANGE
- 13 INSTALL SHRUB, SNOWBERRY
- 14 INSTALL TREE, EDDIE'S WHITE WONDER DOGWOOD
- 15 INSTALL TREE, CHANTICLEER FLOWERING PEAR (MATCH EXISTING VAR.)
- 16 INSTALL TREE, OREGON WHITE OAK
- 17 INSTALL SHRUB, TALL OREGON GRAPE
- 18 INSTALL GROUNDCOVER, KINICKINNICK
- 19 INSTALL GROUNDCOVER, CREEPING MAHONIA
- 20 INSTALL SHRUB, SILK TASSEL
- 21 INSTALL TREE, RED ALDER
- 22 INSTALL TREE, GIANT SEQUOIA
- 23 INSTALL SHRUB, RED-FLOWERING CURRANT
- 24 INSTALL SHRUB, OCEANSPRAY
- 25 NOT USED
- 26 INSTALL SHRUB, PACIFIC NINEBARK
- 27 INSTALL SHRUB, RED-TWIG DOGWOOD
- 28 INSTALL SHRUB, VINE MAPLE
- 29 INSTALL SHRUB, GOLDEN SPIREA
- 30 INSTALL GROUNDCOVER, TINY WINE NINEBARK
- 31 INSTALL GROUNDCOVER, SOFT RUSH
- 32 INSTALL GROUNDCOVER, MIXED DOUGLAS IRIS/JAPANESE IRIS
- 33 INSTALL SHRUB, BOG ROSEMARY
- 34 INSTALL PLANT, TUFTED SEDGE
- 35 SHRUB, KELSEY REDTWIG DOGWOOD
- 36 INSTALL TREE, BIGLEAF MAPLE

SHEET NOTES

- 1. SEE SHEET L300 FOR PLANTING SCHEDULE INCL. QUANT., SIZE AND SPACING
- 2. SEE SHEET G300 FOR PLANTING NOTES
- 3. SEE SHEET L305 FOR PLANTING INSTALLATION DETAILS

MATCHLINE -- SEE SHEET L302



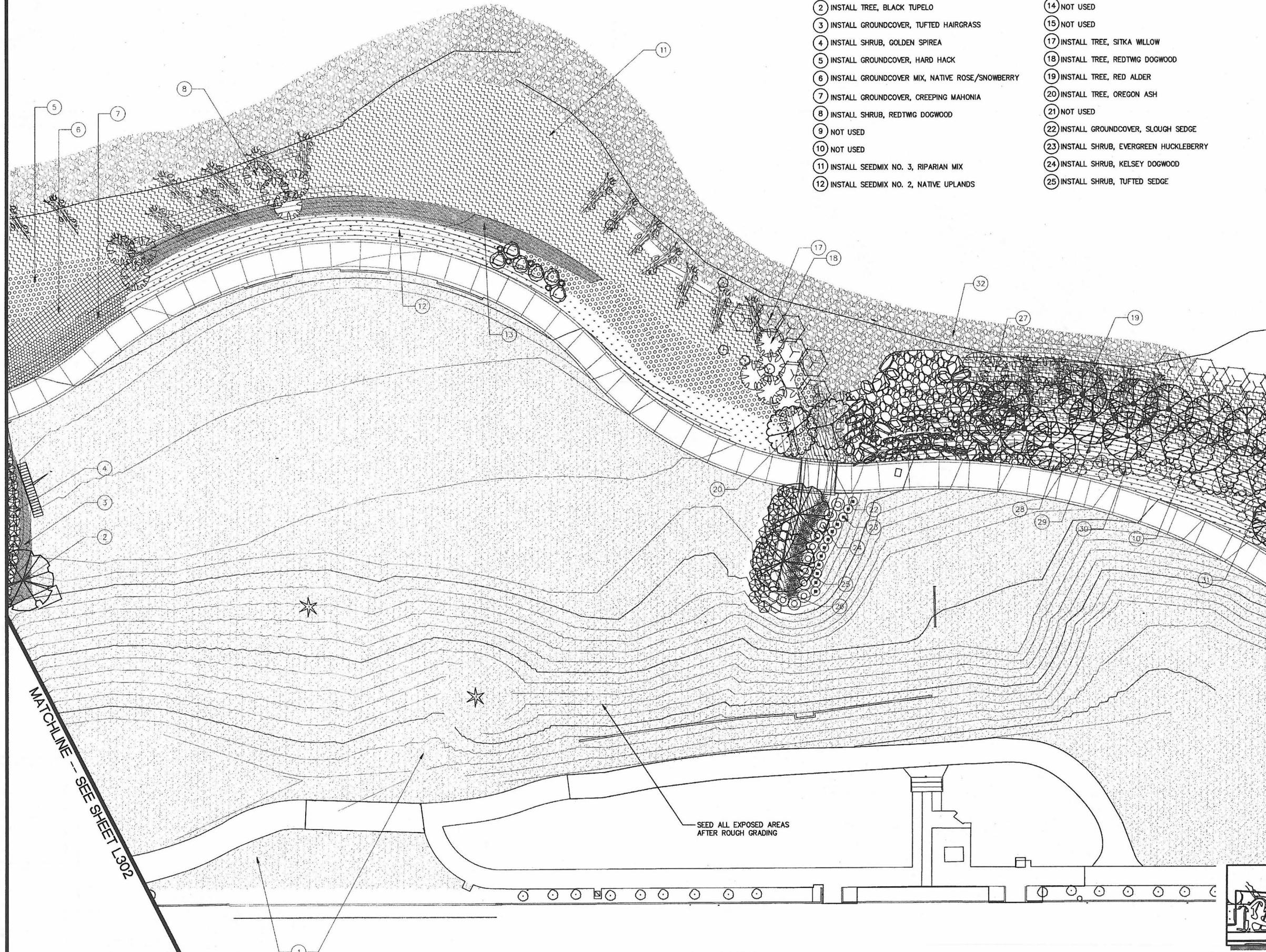
AREA 3 PLANTING SCHEDULE

PLANTING KEYNOTES

- ① SEED WITH SEED MIX NO. 1, LAWN
- ② INSTALL TREE, BLACK TUPELO
- ③ INSTALL GROUNDCOVER, TUFTED HAIRGRASS
- ④ INSTALL SHRUB, GOLDEN SPIREA
- ⑤ INSTALL GROUNDCOVER, HARD HACK
- ⑥ INSTALL GROUNDCOVER MIX, NATIVE ROSE/SNOWBERRY
- ⑦ INSTALL GROUNDCOVER, CREEPING MAHONIA
- ⑧ INSTALL SHRUB, REDTWIG DOGWOOD
- ⑨ NOT USED
- ⑩ NOT USED
- ⑪ INSTALL SEEDMIX NO. 3, RIPARIAN MIX
- ⑫ INSTALL SEEDMIX NO. 2, NATIVE UPLANDS
- ⑬ INSTALL GROUNDCOVER, TUFTED HAIRGRASS
- ⑭ NOT USED
- ⑮ NOT USED
- ⑯ INSTALL TREE, SITKA WILLOW
- ⑰ INSTALL TREE, REDTWIG DOGWOOD
- ⑱ INSTALL TREE, RED ALDER
- ⑲ INSTALL TREE, OREGON ASH
- ⑳ NOT USED
- ㉑ INSTALL GROUNDCOVER, SLOUGH SEDGE
- ㉒ INSTALL SHRUB, EVERGREEN HUCKLEBERRY
- ㉓ INSTALL SHRUB, KELSEY DOGWOOD
- ㉔ INSTALL SHRUB, TUFTED SEDGE
- ㉕ INSTALL SHRUB, DWARF MOCK ORANGE
- ㉖ INSTALL SHRUB, REDTWIG DOGWOOD
- ㉗ INSTALL SHRUB, SNOWBERRY
- ㉘ INSTALL SHRUB, SILK TASSEL
- ㉙ INSTALL SHRUB, RED-FLOWERING CURRANT
- ㉚ INSTALL SHRUB, WESTERN HAZELNUT
- ㉛ INSTALL 3" DEPTH 1-3" RIVER COBBLE TO EXPOSED RIVERBANK

SHEET NOTES

- 1. SEE SHEET L300 FOR PLANTING SCHEDULE
- 2. SEE SHEET G300 FOR PLANTING NOTES
- 3. SEE SHEET L305 FOR PLANTING INSTALLATION DETAILS

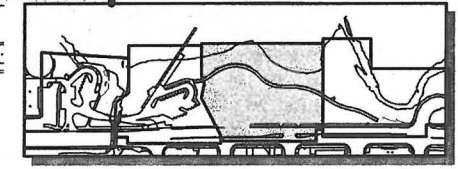
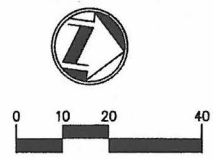


MATCHLINE -- SEE SHEET L302

MATCHLINE -- SEE SHEET L305

SEED ALL EXPOSED AREAS AFTER ROUGH GRADING

HWY. 99E / McLOUGHLIN BLVD



KEY MAP
NOT TO SCALE



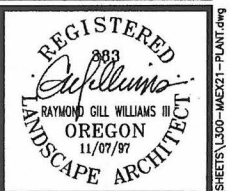
2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE		SIGNATURE	APPROVAL DATE
DEPARTMENT	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT
**MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY**
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
**LANDSCAPE PLANTING PLAN
SHEET 3**

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN. BAR
CK. BXM

L303
JOB NO. MAEX0000-0021

Date/Time: Apr 28, 2014 -- 9:07 am User: bar



MATCHLINE -- SEE SHEET L303

WILLAMETTE RIVER

JOHNSON CREEK

McLOUGHLIN BLVD/ 99E

17TH AVE

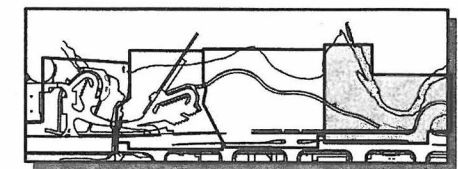
EXISTING TREE, TYP.

PLANTING KEYNOTES

- ① SEED WITH SEED MIX NO. 1, LAWN
- ② INSTALL TREE, SCOULER'S WILLOW
- ③ INSTALL TREE, SITKA WILLOW
- ④ INSTALL TREE, RED ALDER
- ⑤ INSTALL TREE, OREGON ASH
- ⑥ INSTALL SHRUB, WESTERN HAZELNUT
- ⑦ INSTALL SHRUB, TALL OREGON GRAPE
- ⑧ INSTALL SHRUB, EVERGREEN HUCKLEBERRY
- ⑨ INSTALL SHRUB, DWARF MOCK ORANGE
- ⑩ INSTALL TREE, OREGON WHITE OAK
- ⑪ INSTALL TREE, RED FLOWERING CURRANT
- ⑫ INSTALL SHRUB, SNOWBERRY

SHEET NOTES

- 1. SEE SHEET L300 FOR COMPREHENSIVE PLANTING SCHEDULE
- 2. SEE SHEET G300 FOR COMPREHENSIVE PLANTING NOTES
- 3. SEE SHEET L305 FOR PLANTING INSTALLATION DETAILS



KEY MAP
NOT TO SCALE

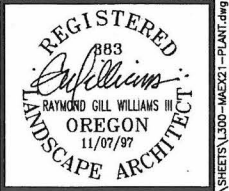


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Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE	
DEPARTMENT	APPROVAL DATE
CITY LANDSCAPE ARCHITECT	
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	
SIGNATURE	

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	LANDSCAPE PLANTING PLAN SHEET 4

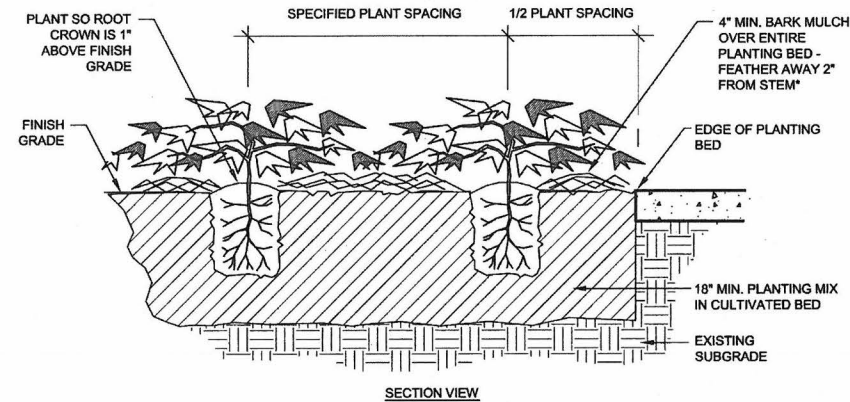
NO.	DATE	REVISION	BY



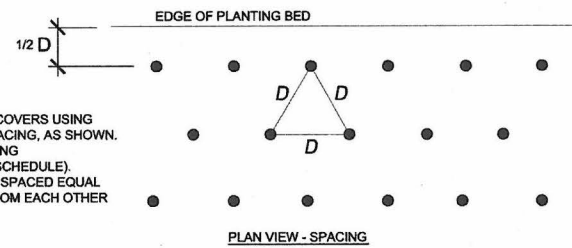
SCALE: AS SHOWN
DATE: 4-1-2014
DRN. BAR
CK. BXM

L304
JOB NO. MAEX0000-0021

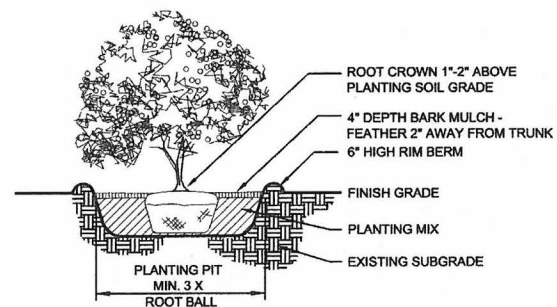
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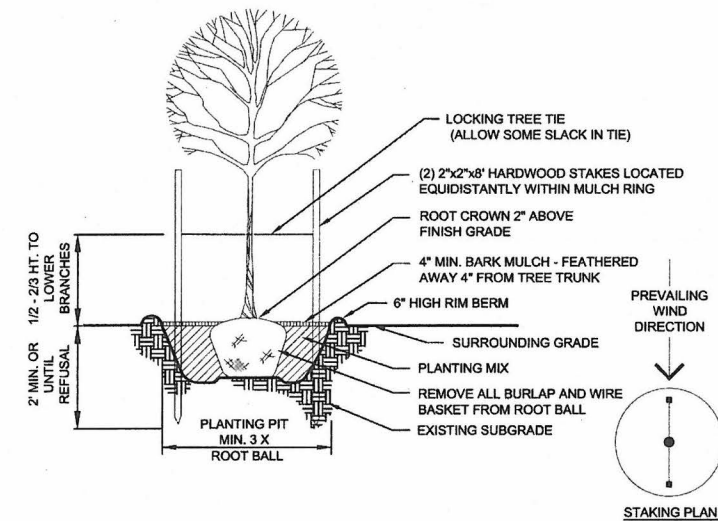
NOTE:
 PLANT GROUNDCOVERS USING
 TRIANGULAR SPACING, AS SHOWN.
 D = PLANT SPACING
 (SEE PLANTING SCHEDULE)
 LOCATE PLANTS SPACED EQUAL
 DISTANCE (D) FROM EACH OTHER
 AS SHOWN.



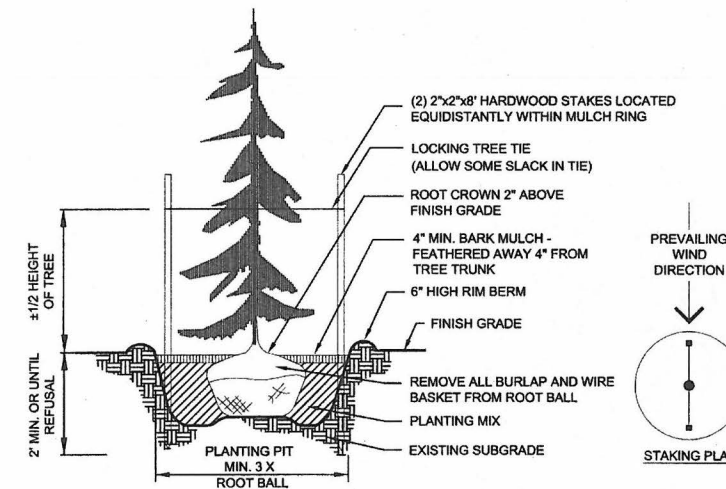
4 GROUNDCOVER PLANTING AT PAVEMENT
 SCALE: NONE



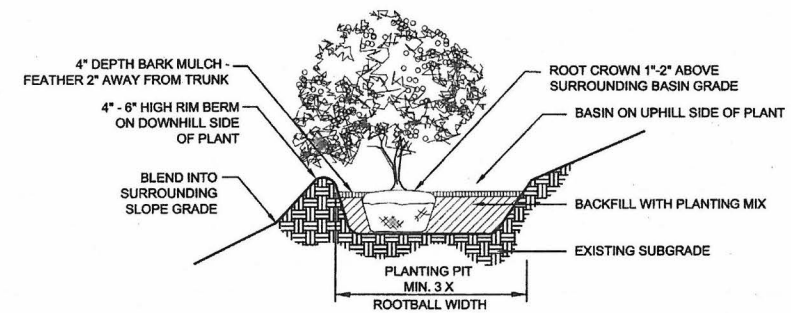
5 CONTAINER PLANTING
 SCALE: NONE



1 DECIDUOUS TREE PLANTING
 SCALE: NONE



2 CONIFER TREE PLANTING
 SCALE: NONE



3 CONTAINER PLANTING ON SLOPE
 SCALE: NONE

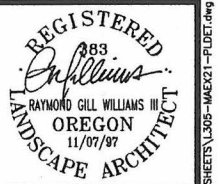


2100 SW River Parkway
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CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
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CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	PLANTING DETAILS

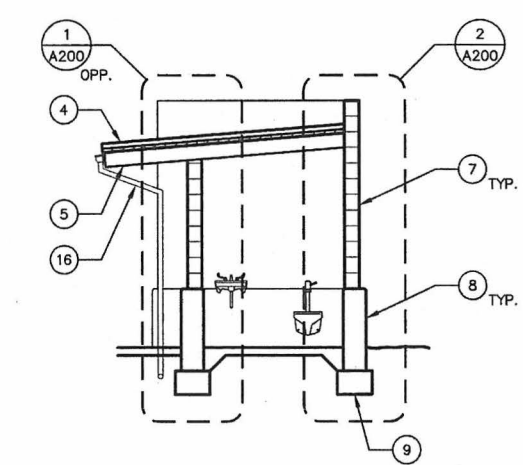
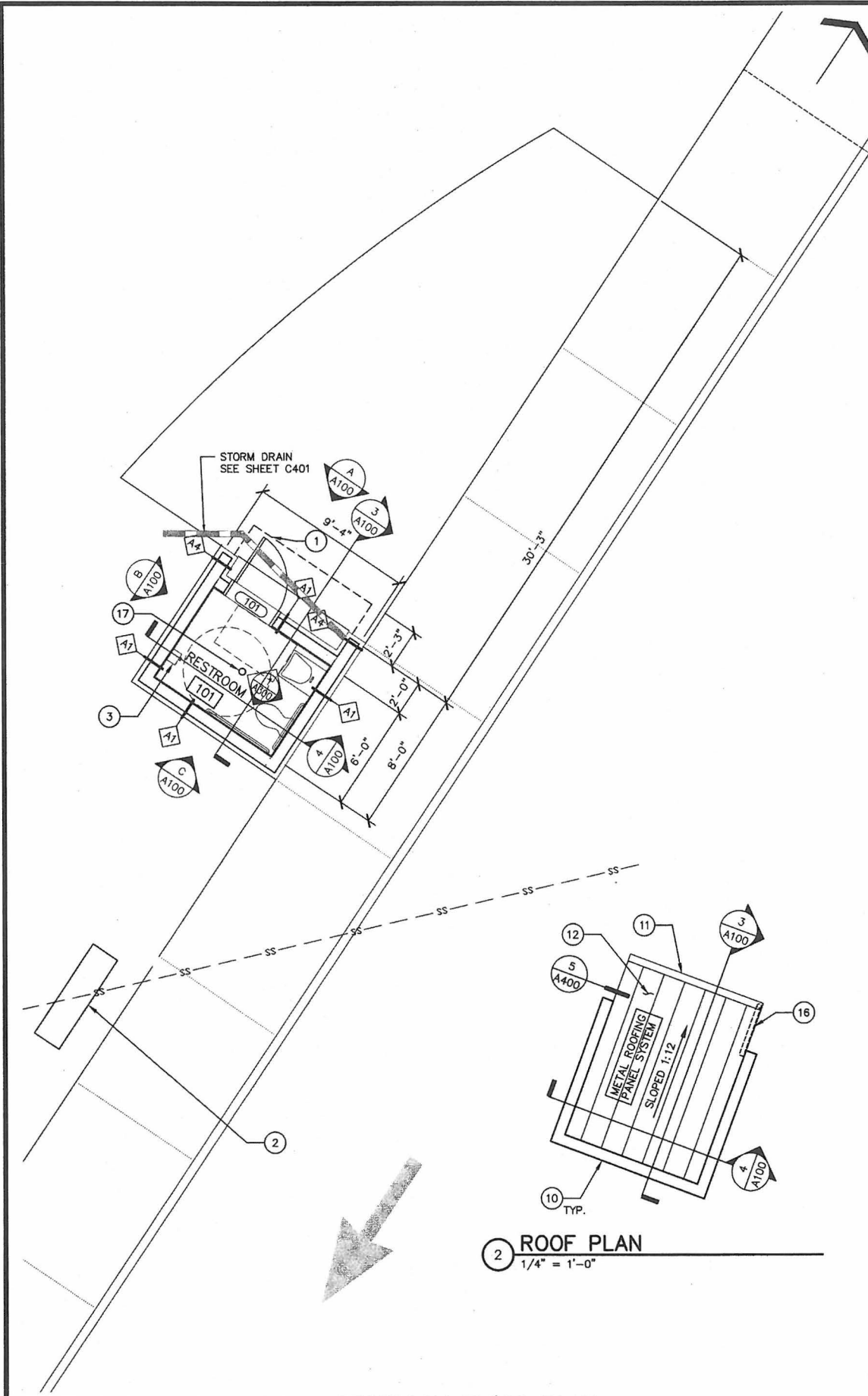
NO.	DATE	REVISION	BY



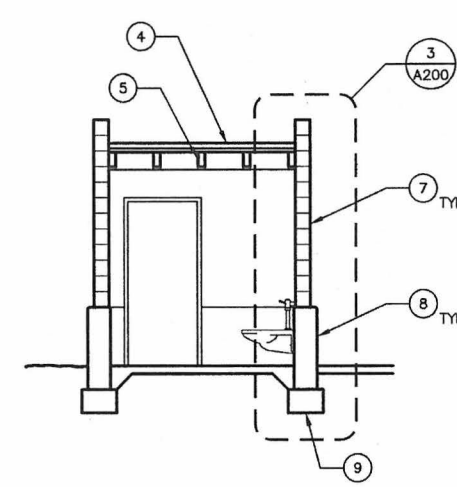
SCALE: AS SHOWN
 DATE: 4-1-2014
 DRN: BAR
 CK: BXM

L305
 JOB NO. MAEX0000-0021

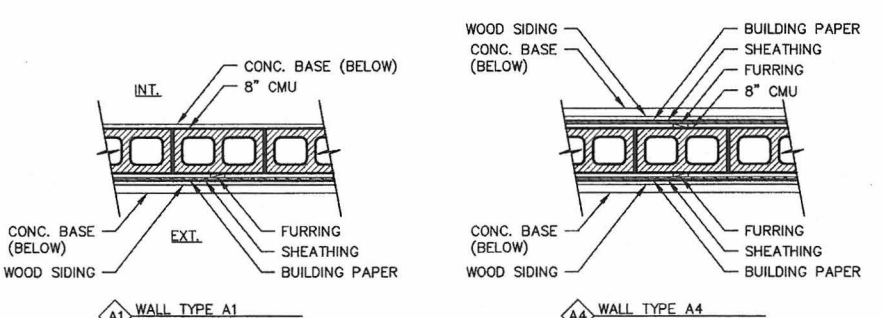
User: bar Date/Time: Apr 28, 2014 9:05am T:\040000\040000\SHEETS\L305-MAE21-PLDET.dwg



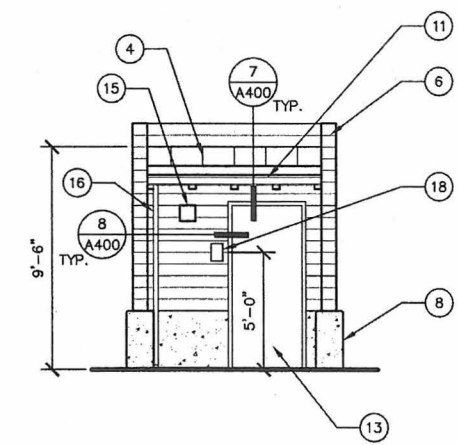
3 BUILDING SECTION
1/4" = 1'-0"



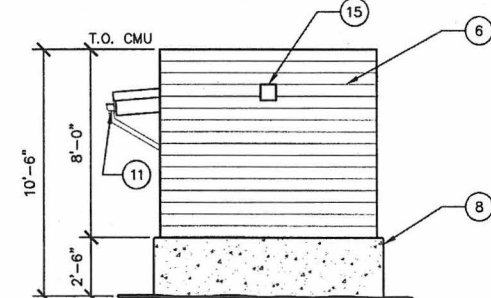
4 BUILDING SECTION
1/4" = 1'-0"



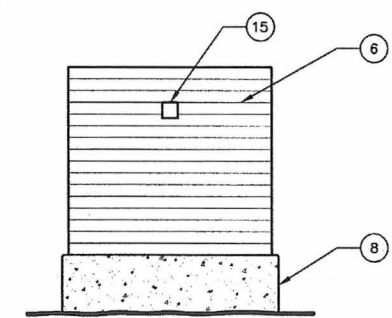
5 WALL TYPES
3/4" = 1'-0"



A EXTERIOR ELEVATION
1/4" = 1'-0"



B EXTERIOR ELEVATION
1/4" = 1'-0"

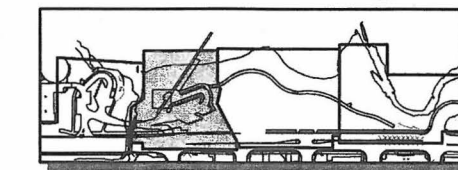


C EXTERIOR ELEVATION
1/4" = 1'-0"

- KEYNOTES**
- LINE OF ROOF ABOVE
 - BENCH, SEE CIVIL
 - SURFACE MOUNTED HAND DRYER
 - STANDING SEAM METAL ROOF
 - ROOF FRAMING, SEE STRUCTURAL
 - LAP CEDAR WOOD SIDING
 - CMU WALL
 - CONCRETE BASE
 - CONCRETE FOOTING, SEE STRUCTURAL
 - PARAPET WALL
 - GUTTER
 - METAL ROOFING PANEL SYSTEM
 - 3'-0" x 7'-0" HOLLOW METAL DOOR
 - BOAT RAMP
 - LIGHTING, SEE ELECTRICAL
 - DOWNSPOUT
 - FLOOR DRAIN, SEE MECHANICAL
 - SIGNAGE

- SHEET NOTES**
- ALL DIMENSIONS ARE TO THE FACE OF CONCRETE, CMU, OR CENTER OF COLUMN AS INDICATED, UNLESS NOTED OTHERWISE.
 - ALL DOORS TO SINGLE OCCUPANT RESTROOMS TO BE UNDERCUT FOR AIR INTAKE.
 - TOP OF CONCRETE FLOOR SLAB ELEVATION = 25.28'
 - SEE 2/A300 FOR STANDARD MOUNTING HEIGHTS.
 - ALL DOOR JAMBS LOCATED 8" FROM NEAREST INTERSECTING WALL CONDITION OR NEAREST BLOCK MODULE.
 - ALL FLOOR SLOPES ARE TO BE 1 UNIT VERTICAL IN 50 UNITS HORIZONTAL (2% SLOPE).
 - ALL EXPOSED WOOD TO BE STAINED, SEE SPECIFICATION SECTION 099300.
 - ALL INTERIOR CONCRETE FLOOR SLABS TO BE SEALED, SEE SPECIFICATION SECTION 099123.
 - ALL EXPOSED INTERIOR CMU AND CONCRETE BUILDING BASE SHALL BE FINISHED WITH BLOCK FILLER (CMU ONLY) PAINT, AND GRAFFITI REPELLANT, SEE SPECIFICATION SECTION 099123.
 - ALL EXPOSED METAL TO BE PAINTED, SEE SPECIFICATION SECTION 099123.
 - ALL EXPOSED EXTERIOR CONCRETE BUILDING BASE TO BE FINISHED WITH WATER REPELLANT AND GRAFFITI REPELLANT, SEE SPECIFICATION SECTIONS 071900 AND 099113.
 - ALL INTERIOR AND EXTERIOR EXPOSED CONCRETE BUILDING BASES SHALL BE RUBBED FINISH, SEE SPECIFICATION SECTION 033000.

- LEGEND**
- A200 EXTERIOR ELEVATION TAG
 - A500 INTERIOR ELEVATION TAG
 - A1 WALL TYPES TAG
 - TO2A DOOR TAG



KEY MAP
NOT TO SCALE

Underground Service Alert
Call: TOI FREE
1-800-422-4133
TWO WORKING DAYS
BEFORE YOU DIG

1 SMALL RESTROOM FLOOR PLAN
1/4" = 1'-0"

2 ROOF PLAN
1/4" = 1'-0"

CITY OF MILWAUKIE ARCHITECT
DAVID EVANS AND ASSOCIATES INC.
2003 SW Brent Parkway
Portland, Oregon 97201
Telephone 503.333.4641

CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT: MILWAUKIE RIVERFRONT PARK
PARK IMPROVEMENT PROJECT
S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: SMALL RESTROOM-PLANS,
ELEVATIONS & SECTIONS

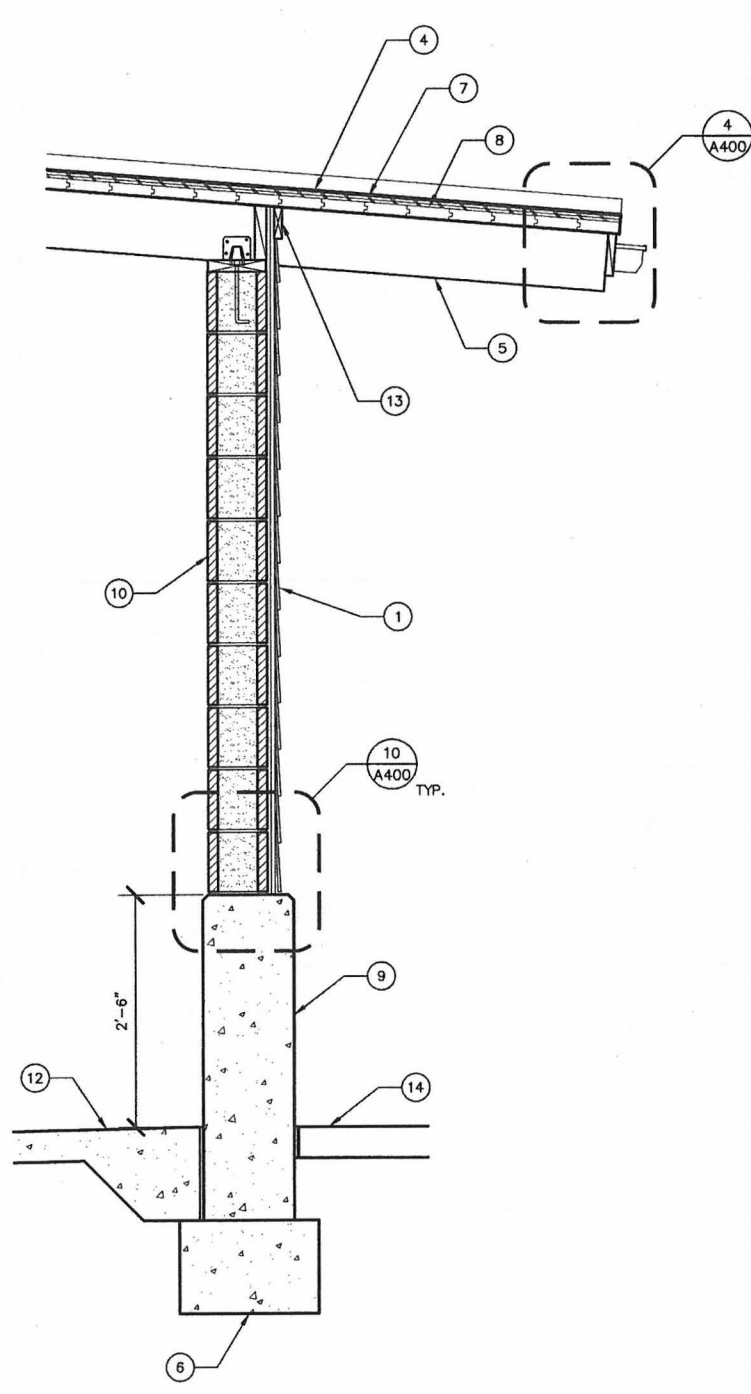
NO.	DATE	REVISION

REGISTERED ARCHITECT
3595
TODD A. MARCUM
PORTLAND, OREGON
STATE OF OREGON

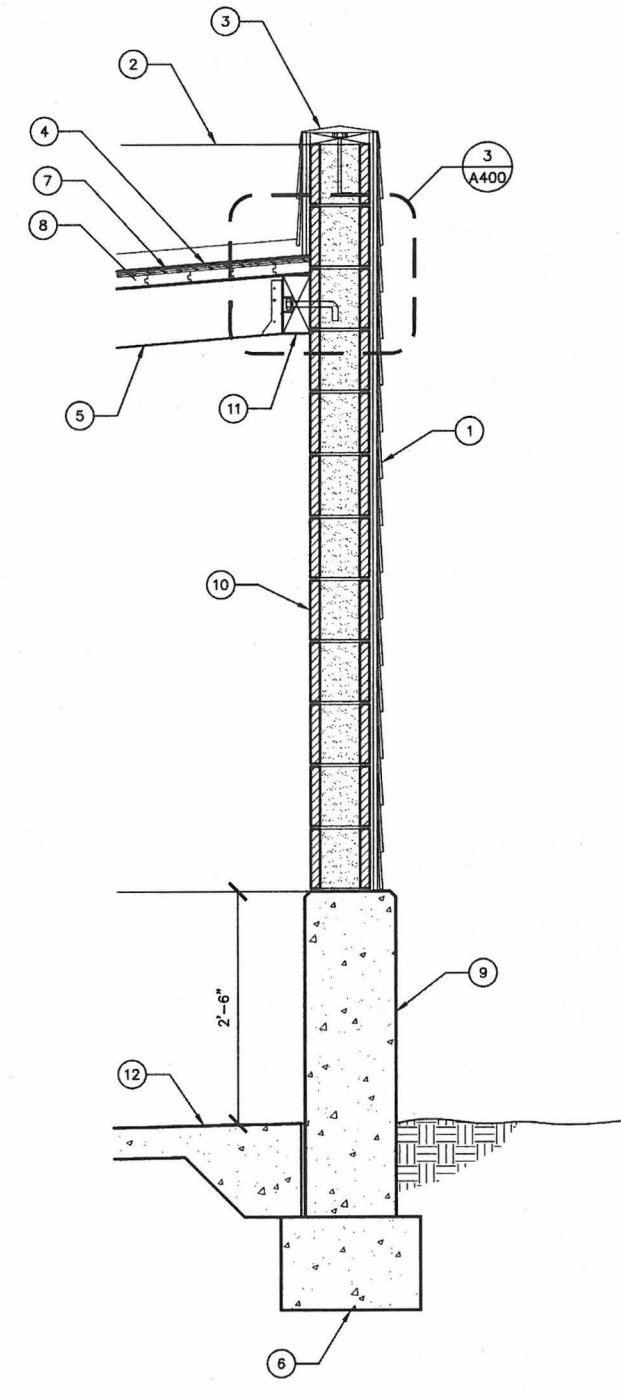
SCALE: AS SHOWN
DATE: 4-1-2014
DRN: KEMA
CK:

A100
JOB NO. MAEX0000-0021

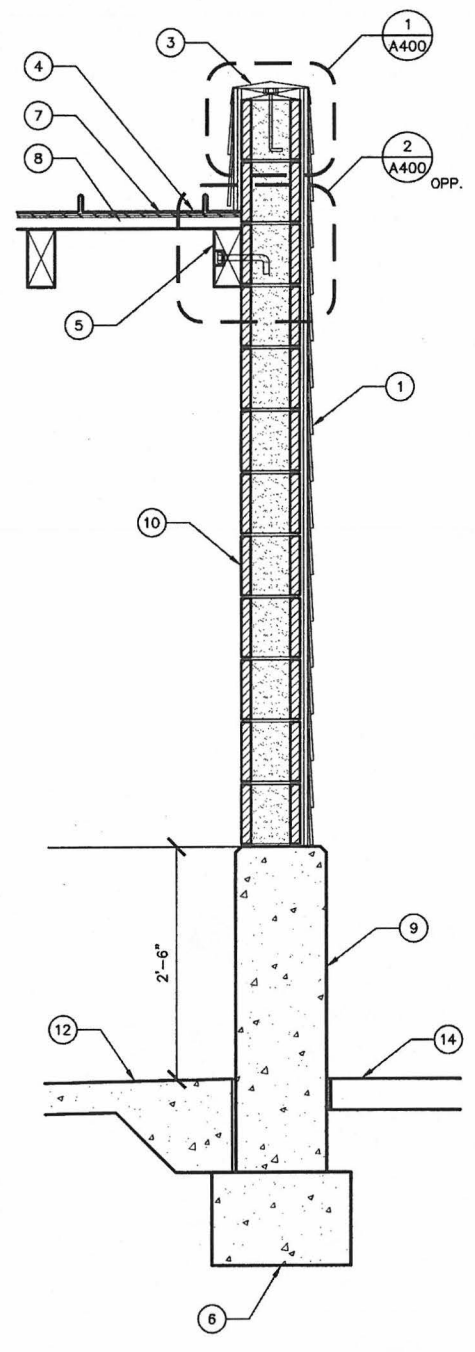
Drawing File: \\Pds41\Project\MAEX0000\0021\040000\01\040000\01-SHEETS\A100-MAEX01-FLOOR PLAN.dwg Date/Time: Apr 07, 2014 - 4:38pm User: adh



1 WALL SECTION
1" = 1'-0"



2 WALL SECTION
1" = 1'-0"



3 WALL SECTION
1" = 1'-0"

KEYNOTES

- 1 WOOD SIDING
- 2 CMU WALL BEYOND
- 3 METAL COPING
- 4 STANDING SEAM METAL ROOF SYSTEM
- 5 ROOF FRAMING, SEE STRUCTURAL
- 6 CONCRETE FOOTING, SEE STRUCTURAL
- 7 PLYWOOD SHEATHING, SEE STRUCTURAL
- 8 2x WOOD DECKING
- 9 CONCRETE BASE
- 10 8" CMU WALL, SEE FLOOR PLAN SHEET A100.
- 11 4x LEDGER
- 12 CONCRETE SLAB, SEE STRUCTURAL
- 13 3/4x4 WOOD TRIM
- 14 CONCRETE SIDEWALK, SEE CIVIL

DAVID EVANS AND ASSOCIATES INC.
ARCHITECT
1000 SW River Parkway
Portland, Oregon 97201
Telephone: 503.221.6644

CITY OF MILWAUKIE		SIGNATURE	APPROVAL DATE
DEPARTMENT	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT
**MILWAUKIE RIVERFRONT PARK
PARK IMPROVEMENT PROJECT**
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
**ARCHITECTURAL
WALL SECTIONS**

NO.	DATE	REVISION BY

REGISTERED ARCHITECT
3596
TODD A. MARCUS
PORTLAND, OREGON
STATE OF OREGON

SCALE: AS SHOWN
DATE: 4-1-2014
DRN. KEMA, BAR
CK.

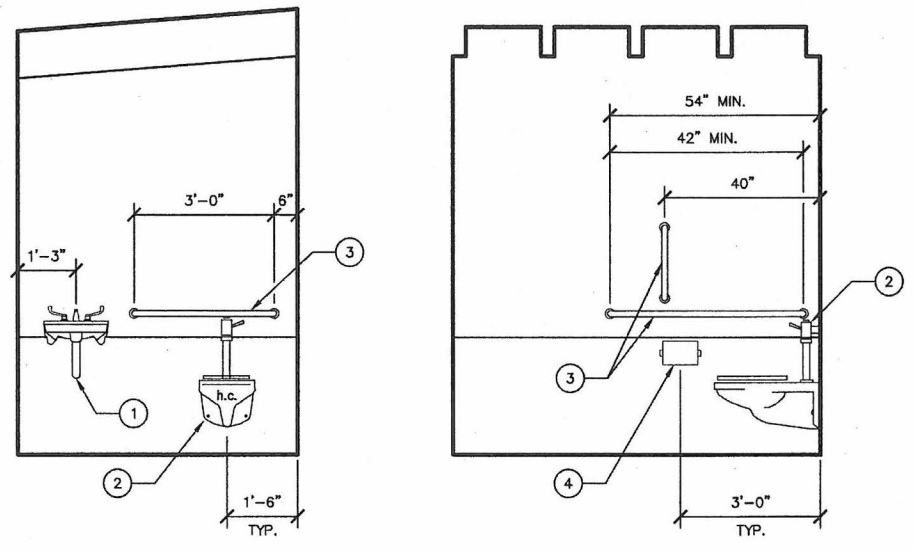
A200
JOB NO. MAEX0000-0021

Underground Service Alert
Call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS
BEFORE YOU DIG

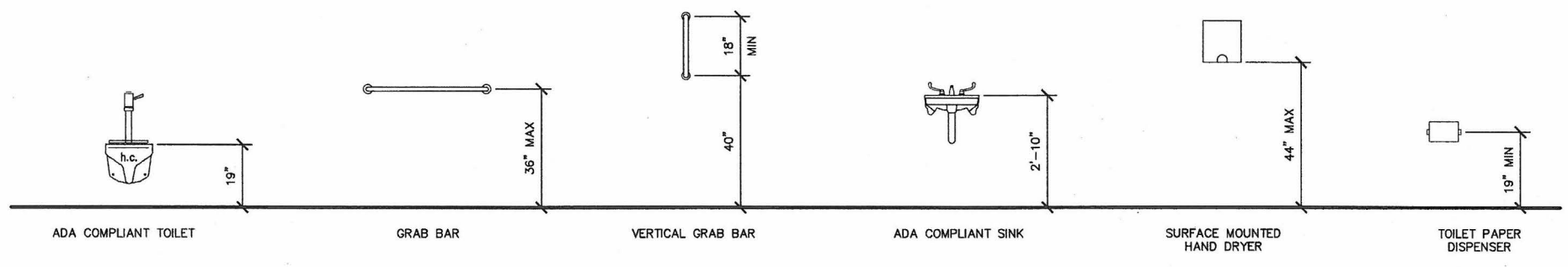
Date/Time: Mar 31, 2014 - 2:57pm User: Kema
c:\p\cs\kema\p\pub\ah\2524\A200-MAEX01-1-WSECT.dwg

KEYNOTES

- 1 SINK
- 2 ADA COMPLIANT TOILET
- 3 GRAB BAR
- 4 TOILET PAPER DISPENSER



1 INTERIOR ELEVATIONS - RESTROOM
1/2" = 1'-0"



2 STANDARD FIXTURE MOUNTING HEIGHTS
1/2" = 1'-0"

ARCHITECT
DAVID EVANS AND ASSOCIATES INC.
Portland, Oregon 97201 Telephone: 503.221.5661

CITY OF MILWAUKIE	APPROVAL DATE
DEPARTMENT	SIGNATURE
CITY LANDSCAPE ARCHITECT	
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	

PROJECT: MILWAUKIE RIVERFRONT PARK IMPROVEMENT PROJECT
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: INTERIOR ELEVATIONS

NO.	DATE	REVISION	BY

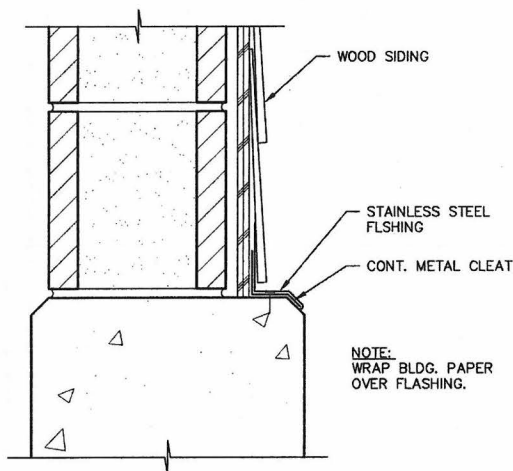
REGISTERED ARCHITECT
3536
TODD A. MARCUM
PORTLAND, OREGON
STATE OF OREGON

SCALE: AS SHOWN
DATE: 4-1-2014
DRN. KEMA, BAR
CK.

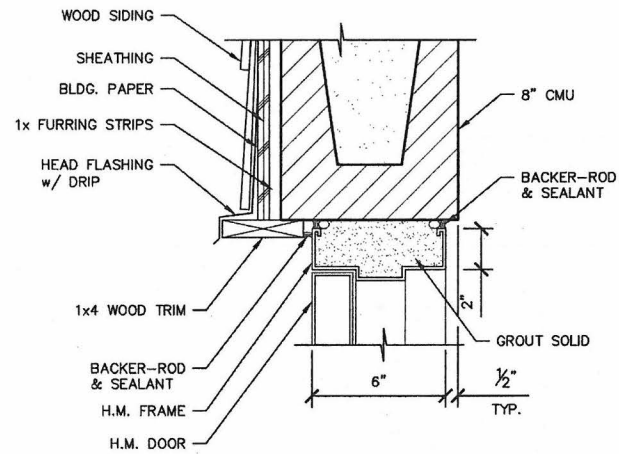
A300
JOB NO. MAEX0000-0021

Underground Service Alert
Call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

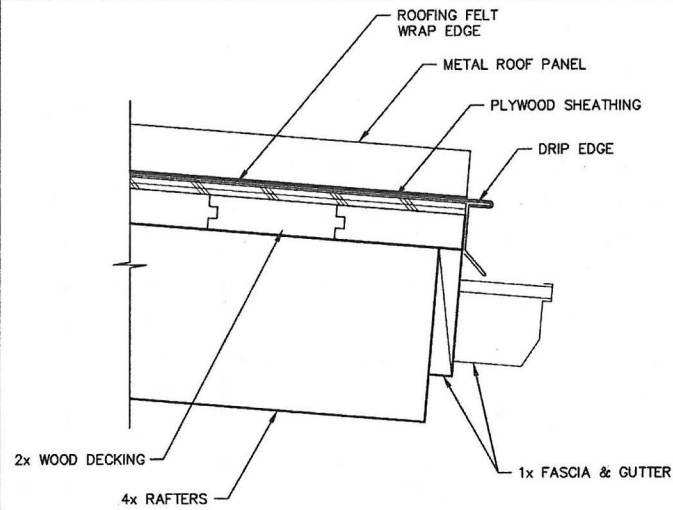
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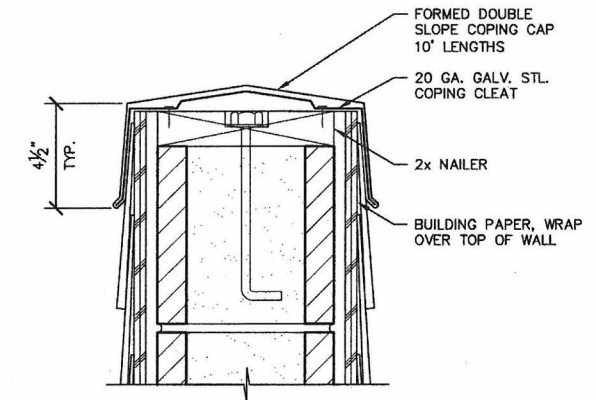
10 FLASHING @ CONC. BASE
3" = 1'-0"



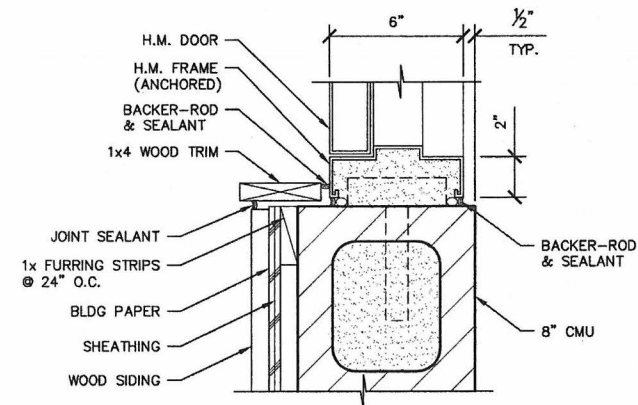
7 TYP. DOOR HEAD
3" = 1'-0"



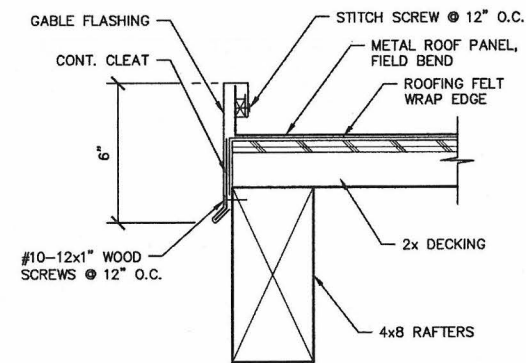
4 TYP. EAVE DETAIL
3" = 1'-0"



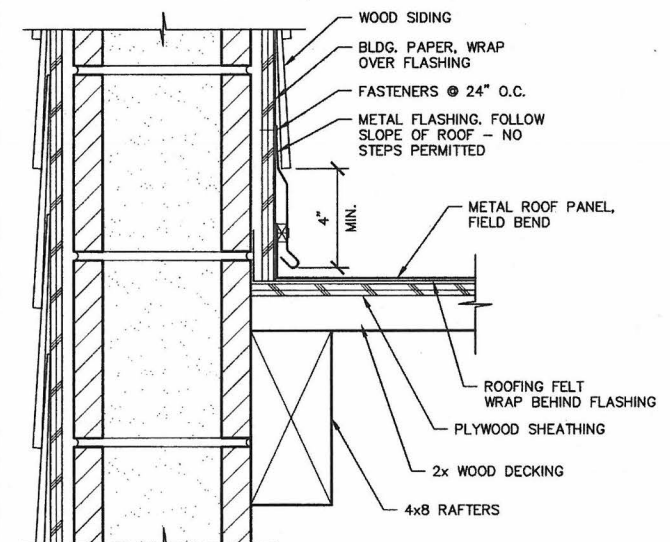
1 TYP. COPING DETAIL
3" = 1'-0"



8 TYP. DOOR JAMB
3" = 1'-0"



5 TYP. GABLE DETAIL
3" = 1'-0"



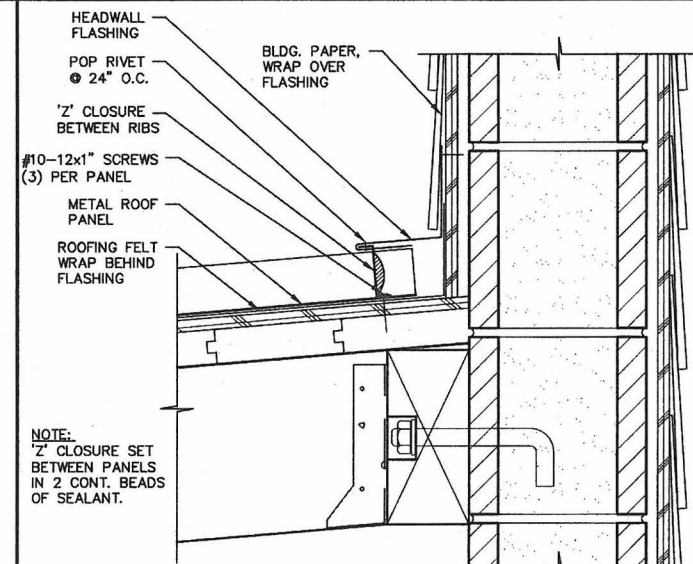
2 TYP. SIDEWALL DETAIL
3" = 1'-0"

11 NOT USED
3" = 1'-0"

12 NOT USED
3" = 1'-0"

9 NOT USED
3" = 1'-0"

6 NOT USED
3" = 1'-0"



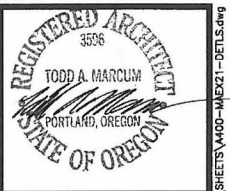
3 TYP. HEADWALL DETAIL
3" = 1'-0"

DAVID EVANS AND ASSOCIATES INC.
ARCHITECT
200 SW 3rd Ave
Portland, Oregon 97201
Telephone: 503.221.1664

CITY OF MILWAUKIE	APPROVAL DATE
	SIGNATURE
DEPARTMENT	ARCHITECT
CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
	PUBLIC WORKS

MILWAUKIE RIVERFRONT PARK
PARK IMPROVEMENT PROJECT
S.E. HARRISON STREET - KELLOGG CREEK
PROJECT TITLE
ARCHITECTURAL DETAILS

NO.	DATE	REVISION	BY



SCALE: AS SHOWN
DATE: 4-1-2014
DRN. KEMA
CK.

A400
JOB NO. MAEX0000-0021

User: Kema Date/Time: Mar 31, 2014 2:55pm T:\040000\0400\SHEETS\A400-MAEX21-BEELS.dwg Drawing File: P:\A\WAE



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

KEYNOTES

- 1 CAST-IN-PLACE CONCRETE STEM WALL
- 2 8" CMU WALL
- 3 4" SOG w/ #4 @ 16" O.C. EA. WAY CENTERED IN SLAB
- 4 8" CMU PARAPET WALL
- 5 8" CMU WALL BELOW
- 6 LAYOUT OF 1/2" APA RATED SHEATHING
- 7 FLOOR DRAIN, SEE MECHANICAL
- 8 4x8 LEDGER w/ 3/4" ANCHOR BOLTS @ 24" O.C.

SHEET NOTES

1. REF. SHEET S300 FOR TYPICAL DETAILS.
2. FLOOR TO SLOPE TOWARD DRAIN AT 1 UNIT VERTICAL IN 50 UNITS HORIZONTAL (2% SLOPE).
3. REF. SHEETS G400 & G401 FOR GENERAL STRUCTURAL NOTES.

LEGEND

- T.O.S. FL. XX.XX' INDICATES TOP OF SLAB ELEVATION
- [Hatched Box] INDICATES 8" SOLID GROUDED CMU WALL w/ #5 @ 32" O.C. VERT. & (2) #4 @ 32" O.C. HORIZ. FROM BOTTOM, TYP.
- [Arrow with D-1] INDICATES SPAN DIRECTION OF 2x6 TONGUE AND GROOVE DECKING FASTENED TO EACH SUPPORT w/ (2) #10x3 1/2" SELF DRILLING BUGLE-HEAD SCREWS AND SPAN DIRECTION OF 1/2" PLYWOOD w/ 8d x 1 1/2" NAILS @ 6" O.C. AT PANEL EDGES AND @ 12" O.C. AT INTERMEDIATE SUPPORTS.

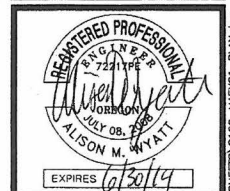
CITY OF MILWAUKIE		APPROVAL DATE
DEPARTMENT	SIGNATURE	
CITY LANDSCAPE ARCHITECT		
COMMUNITY DEVELOPMENT		
PUBLIC WORKS		

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: FOUNDATION PLAN & ROOF FRAMING PLAN

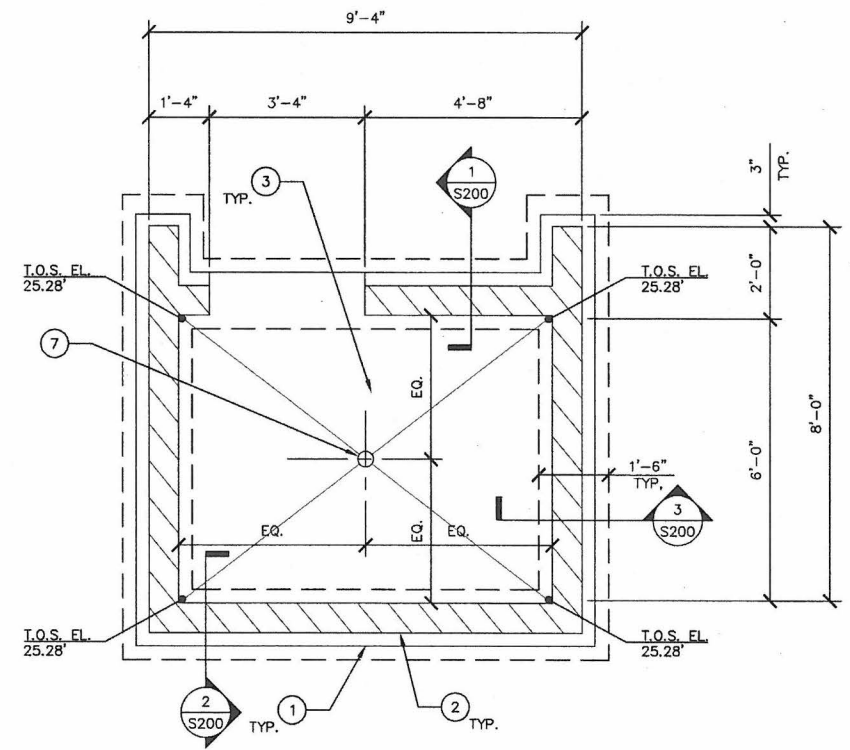
User: Kema

NO.	DATE	REVISION	BY

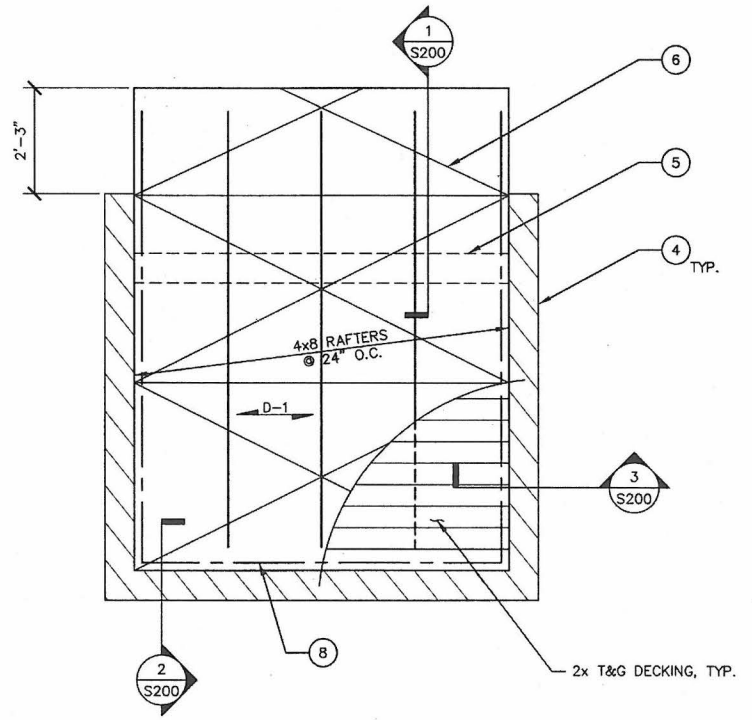


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DATE: 4-1-2014
DRN: KEMA
CK:

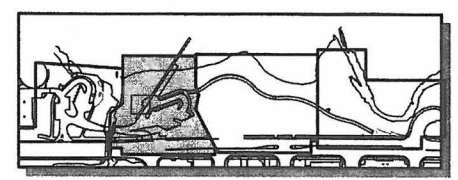
S100
JOB NO. MAEX0000-0021



1 SMALL RESTROOM FOUNDATION PLAN
1/2" = 1'-0"



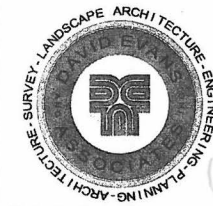
2 SMALL RESTROOM ROOF FRAMING PLAN
1/2" = 1'-0"



KEY MAP
NOT TO SCALE

Underground Service Alert
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TWO WORKING DAYS
BEFORE YOU DIG

Date/Time: Mar 31, 2014 - 12:20pm
Drawing File: P:\A\MAEX00000021\0400000\0400000\SHEETS\S100-MAEX21-PLAN.dwg



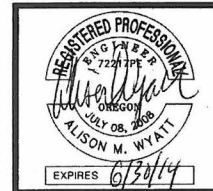
2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE	
DEPARTMENT	APPROVAL DATE
CITY LANDSCAPE ARCHITECT	
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	

PROJECT
**MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY**
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
**STRUCTURAL
 WALL SECTIONS**

NO.	DATE	REVISION	BY

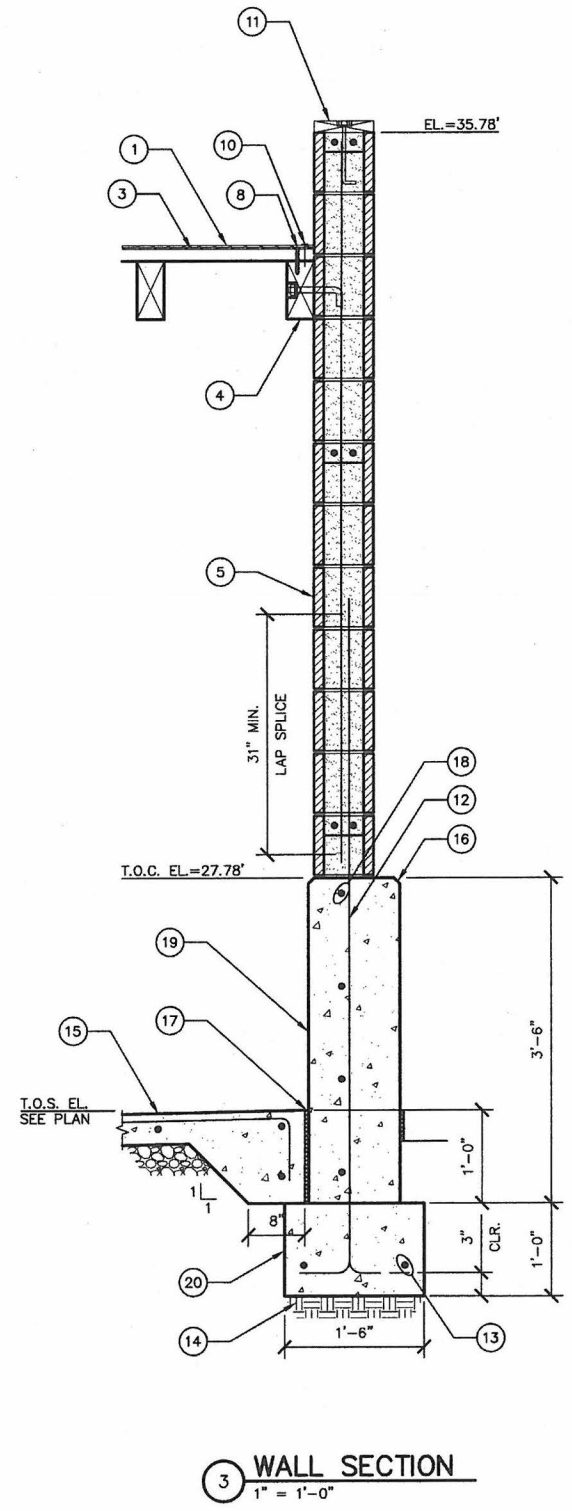
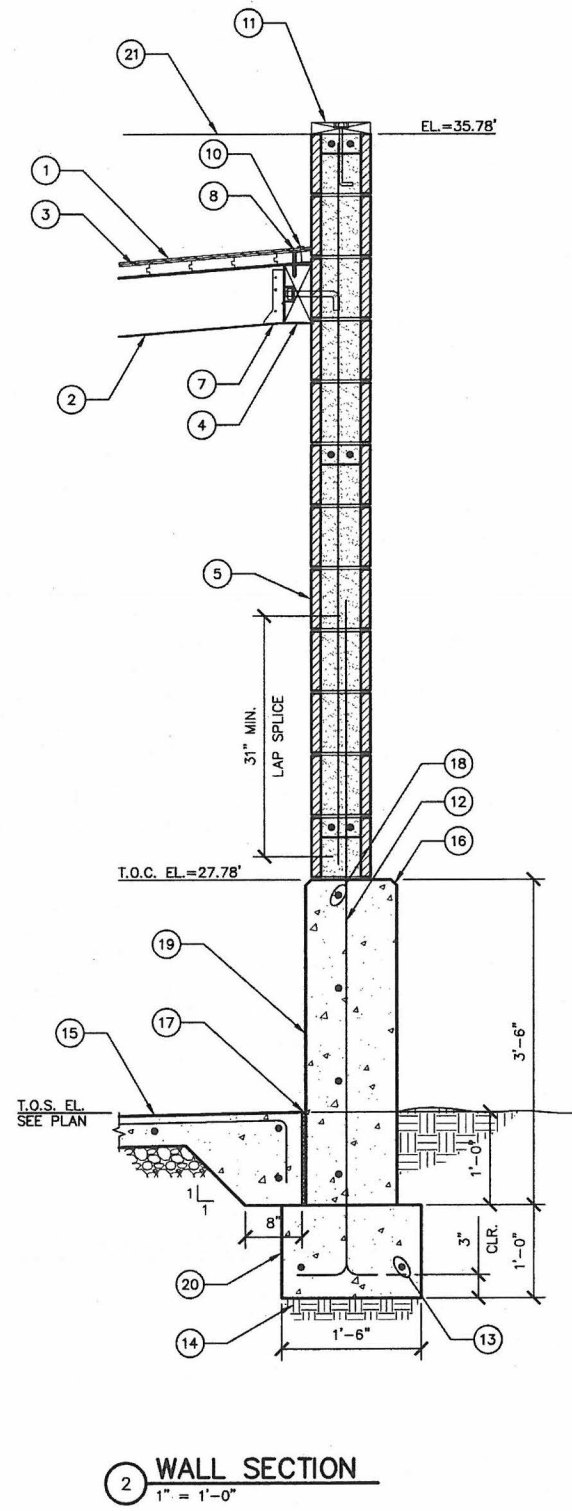
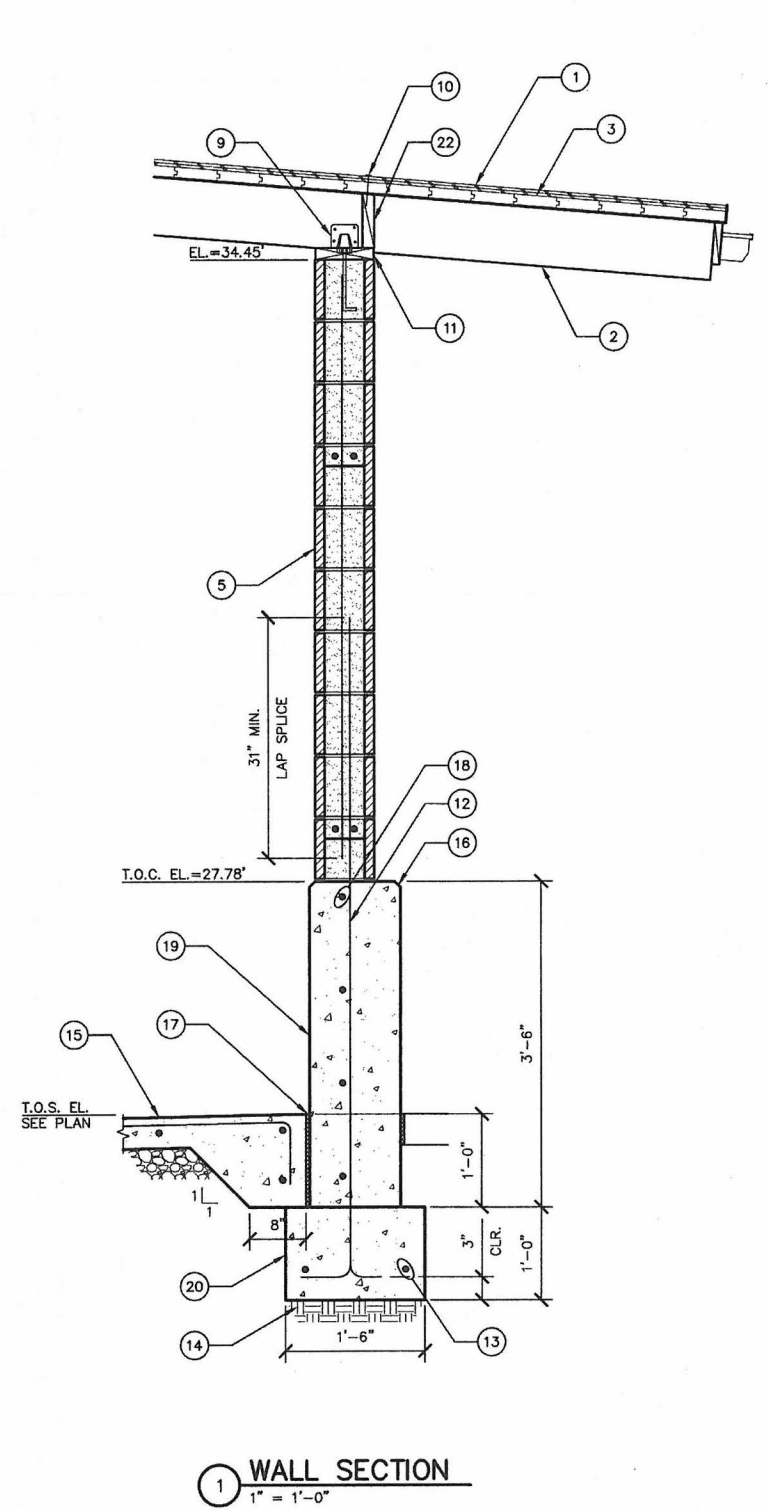


SCALE: AS SHOWN
 DATE: 4-1-2014
 DRN. KEMA
 CK.

S200
 JOB NO. MAEX0000-0021

KEYNOTES

- 1 SHEATHING PER PLAN
- 2 4x8 FRAMING PER PLAN
- 3 2x T&G DECKING
- 4 4x8 LEDGER w/ 3/4" ANCHOR BOLTS @ 24" O.C.
- 5 8" CMU WALL, SEE SHEET S100.
- 6 NOT USED
- 7 SIMPSON HUC48 JOIST HANGER
- 8 #10x3 1/2" SELF DRILLING BUGLE-HEAD SCREWS @ 6" O.C.
- 9 SIMPSON HGA10 EACH TRUSS
- 10 EDGE NAILING, TYP.
- 11 P.T. 2x TOP PL w/ 5/8" ANCHOR BOLTS @ 24" O.C.
- 12 #5 VERT. DOWELS @ 16" O.C. ALTERNATE HOOKS. EVERY OTHER DOWEL TO EXTEND INTO CMU WALL AS SHOWN.
- 13 (2) #4 CONT.
- 14 UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL
- 15 4" CONCRETE SLAB ON GRADE
- 16 3/4" CHAMFER
- 17 1/2" PRE-MOLDED JOINT FILLER
- 18 #5 HORIZ. @ 12" O.C.
- 19 11 3/4" CONCRETE STEM WALL
- 20 CONCRETE FOOTING
- 21 CMU WALL BEYOND
- 22 2X BLKG w/ (2) A35 CLIPS EACH PIECE



Underground Service Alert
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 1-800-422-4133
 TWO WORKING DAYS
 BEFORE YOU DIG

Date/Time: Mar 31, 2014 - 12:20pm User: Kema



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6683
Fax: 503.223.2701

CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	DEPARTMENT	ARCHITECT
MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK	COMMUNITY DEVELOPMENT	PUBLIC WORKS
	STRUCTURAL DETAILS	

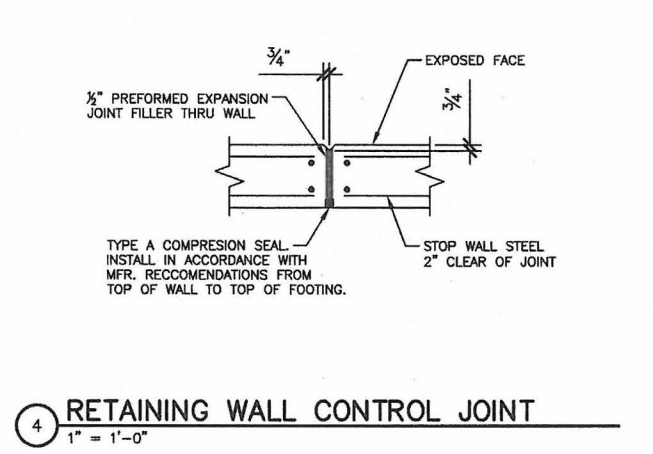
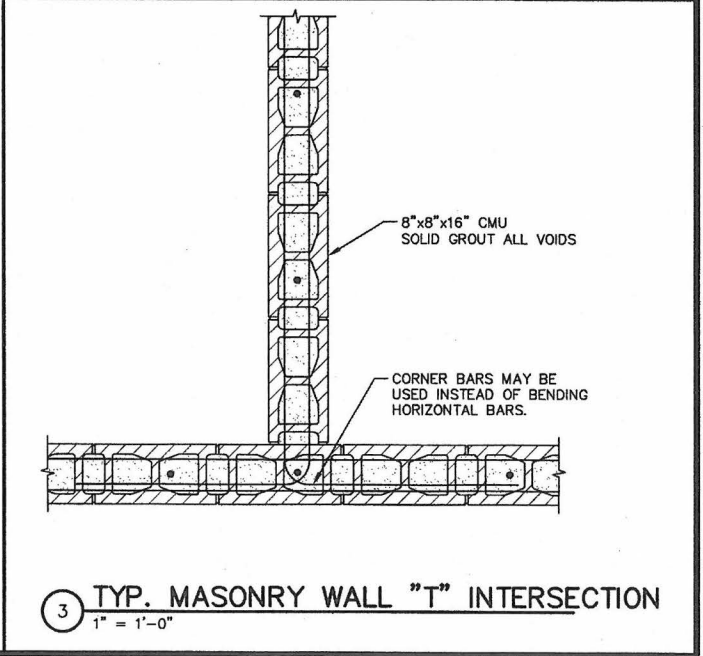
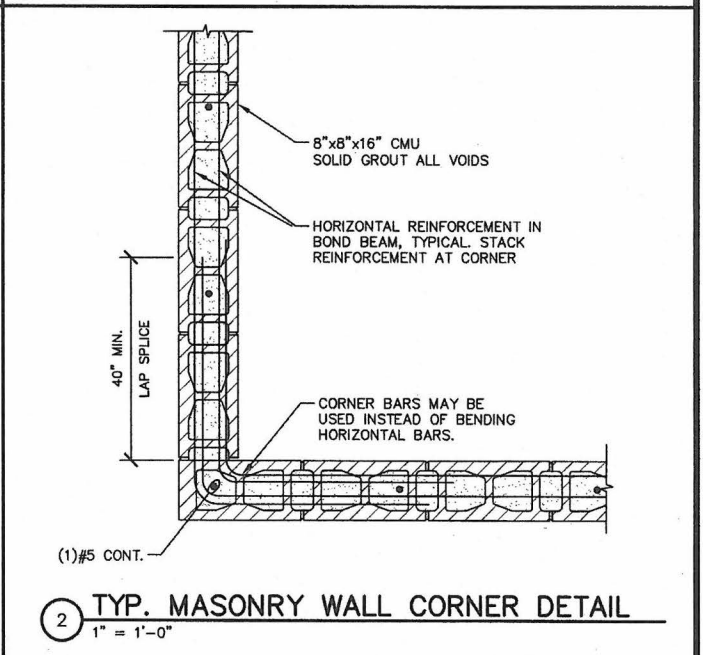
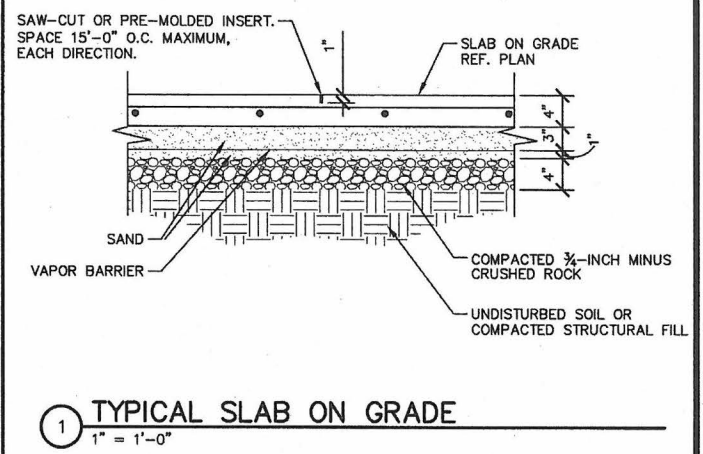
PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: STRUCTURAL DETAILS

NO. DATE	REVISION BY



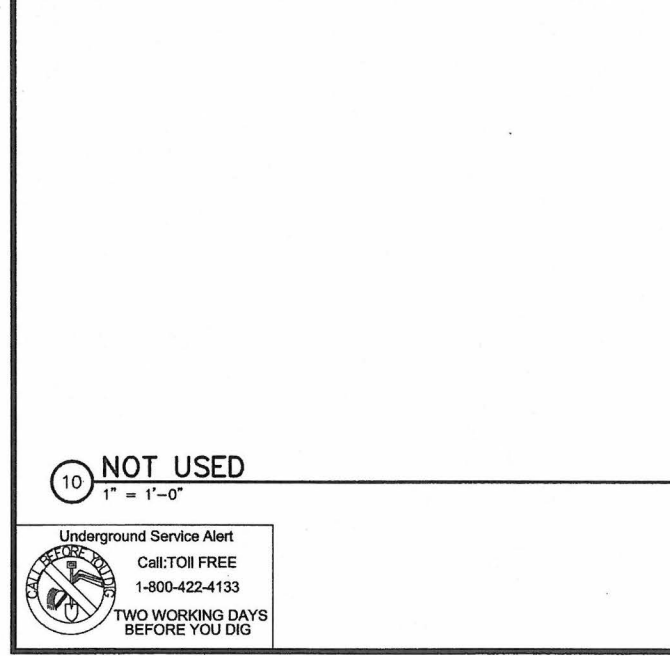
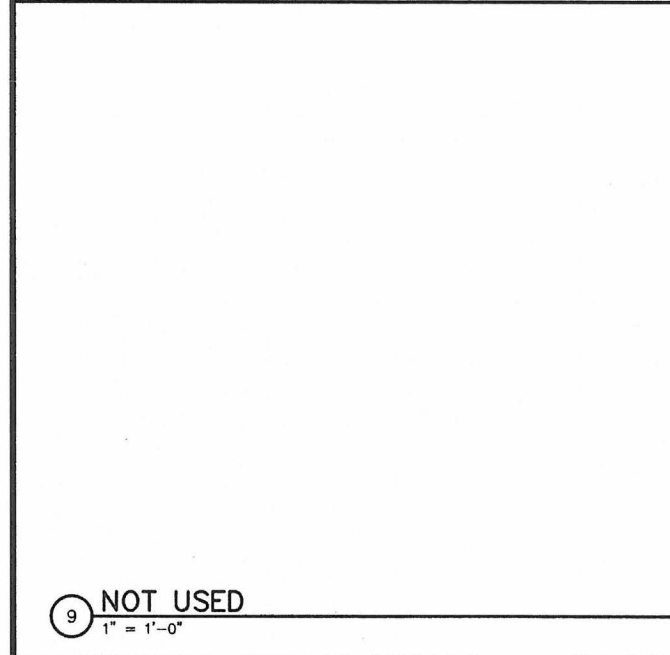
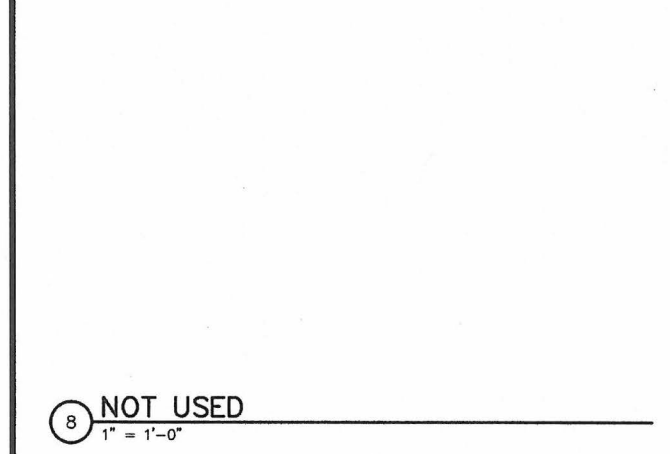
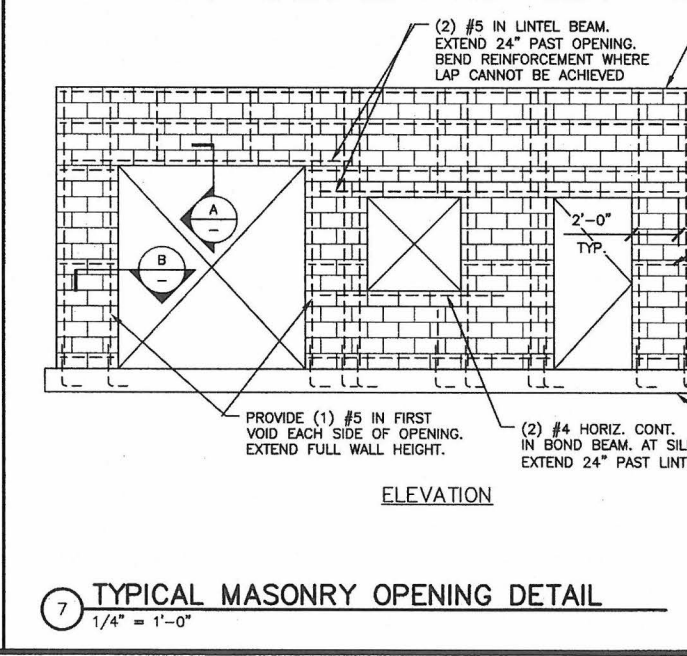
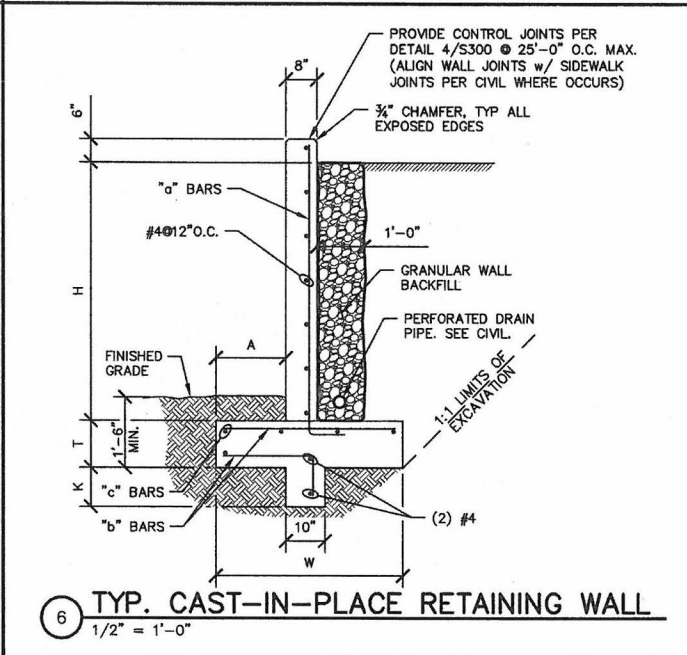
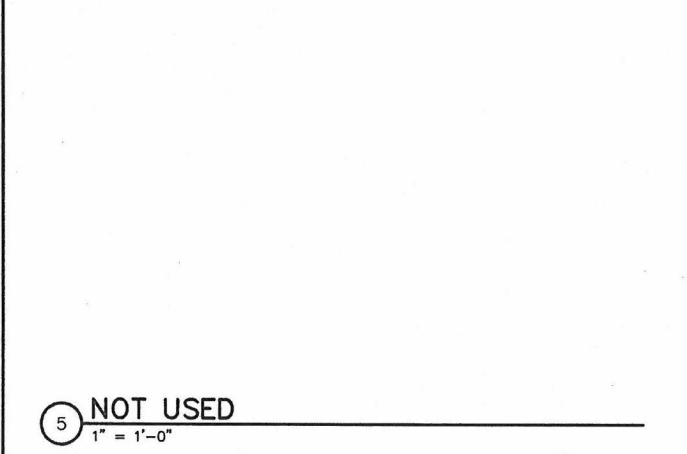
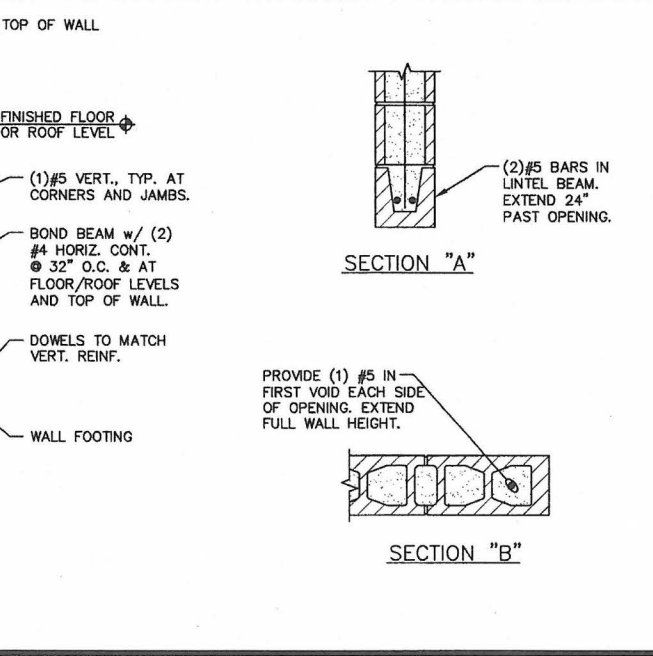
SCALE: AS SHOWN
DATE: 4-1-2014
DRN: KEMA, BAR
CK:

S300
JOB NO. MAEX0000-0021

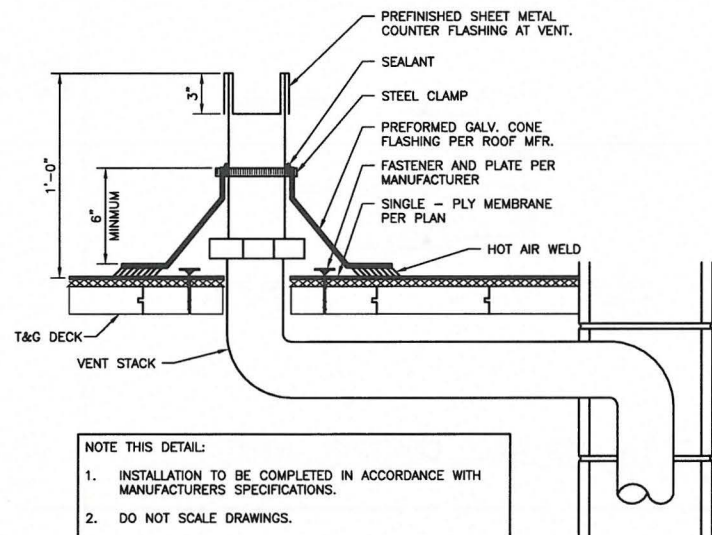


RETAINING WALL SCHEDULE

H (ft)	W (ft)	T (in)	A (in)	REINFORCING			K (in)
				"a"	"b"	"c"	
PLANTER	2	12	8	#4@16"O.C.	#4@24"O.C.	(3) #4	-
2	2.5	12	6	#4@16"O.C.	#4@24"O.C.	(4) #4	-
4.5	4.0	12	18	#4@12"O.C.	#4@12"O.C.	(4) #4	10
6	4.5	12	18	#5@12"O.C.	#5@12"O.C.	(4) #5	10

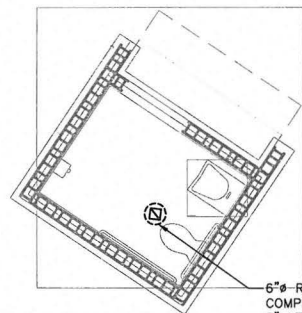


Underground Service Alert
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- NOTE THIS DETAIL:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
 2. DO NOT SCALE DRAWINGS.
 3. MINIMUM OF 4 FASTENERS PER PIPE OR 1 FASTENER PER DIAMETER INCH OF PIPE ARE REQUIRED. PIPE FLASHINGS AVAILABLE IN 1/4" - 14" DIAMETER.
 4. COORDINATE WITH ALL TRADES INVOLVED. ALSO COORDINATE ROOFING DETAIL WITH ROOFING CONTRACTOR.

3 PLUMBING VENT FLASHING DETAIL
M100 NOT TO SCALE



6" R-OMLAIR ROTARY TURBINE ROOF VENT, COMPLETE WITH CURB AND ADAPTOR. PROVIDE 6" LENGTH OF 6" SHEET METAL DUCT INTO SPACE AND PROVIDE 1/2" MESH SCREEN OVER TERMINATION.

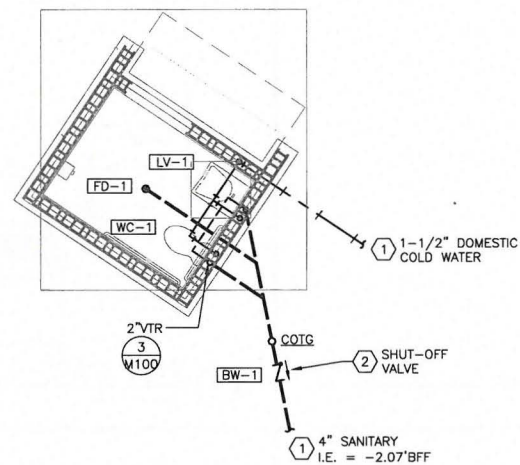
1 SINGLE RESTROOM - MECHANICAL
M100 SCALE: 1/4" = 1'-0"

PLUMBING FIXTURE CONNECTION SCHEDULE ①							
MARK	FIXTURE	W	V	CW	HW	MANUFACTURER	REMARKS
WC-1	WATER CLOSET ADA	4	2	1-1/4		ACORN PENAL-WARE 1680 SERIES 1680-1-ULF-FVL-ADA	WALL-HUNG, PROVIDE ADA 1.6 GPF VALVE, ELONGATED, SIPHON JET TOILET, ADA HEIGHT, 14 GAGE, TYPE 304 SS, WHITE OPEN FRONT SEAT.
LV-1	LAVATORY (COLD WATER) ADA	2	1-1/2	1/2		ACORN PENAL-WARE 1652 SERIES 1652-ADA-1-LF-3	WALL HUNG, RECTANGULAR, CHROME GRID STRAINER, P-TRAP, SUPPLIES, STOPS, 14 GAGE, TYPE 304 SS, WALL HANGER OR CONCEALED ARMS, 4" CENTERS.
FD-1	FLOOR DRAIN	3	2			J.R. SMITH 2005	PRIME.
BW-1	BACKWATER VALVE	4				J.R. SMITH 7150	PROVIDE EXTENSION SIZE AS NEEDED.

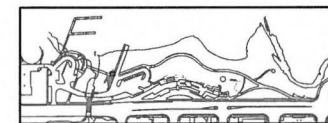
① PIPE SIZES SHOWN ARE BRANCH PIPING SIZES UNLESS SHOWN OTHERWISE ON DRAWINGS.

NOTES THIS SHEET

- ① REFER TO CIVIL DRAWING FOR CONTINUATION AND CONNECTION TO SITE UTILITIES.
- ② INSTALL BACKWATER VALVE WITH IN-LINE MANUAL SHUT-OFF GATE VALVE FOR FLOOD CONTROL.



2 SINGLE RESTROOM - PLUMBING
M100 SCALE: 1/4" = 1'-0"



KEYPLAN
NOT TO SCALE

R&W
ENGINEERING, INC.
"Engineering Integrated Solutions"
9615 S.W. Allen Boulevard
Suite 107
Beaverton, Oregon 97005
Phone: (503) 726-3315
Fax: (503) 726-3326
E-mail: rwieng@rwieng.com
Project No. 338 088.001 Contact: DWAYNE JOHNSON



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

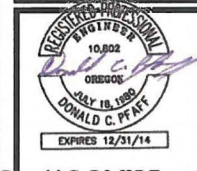
CITY OF MILWAUKIE	DEPARTMENT	SIGNATURE	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
MECHANICAL & PLUMBING
PLANS, LEGEND & SCHEDULES

Date/Time: Mar 27, 2014 - 1:28pm User: Eiv

NO.	DATE	REVISION	BY



Donald C. Peate
SCALE: 1/4" = 1'-0"
DATE: 04-01-2014
DRN: MJP
CK: RDJ

M100
JOB NO. MAEX0000-0021

ELECTRICAL SYMBOL LIST

(E)	EXISTING TO REMAIN		RECEPTACLE - DUPLEX, MOUNT 18" AFF, UON
D.B.	DIRECT BURIED		RECEPTACLE - MOUNTED ABOVE COUNTER
E.N.I.C.	ELECTRIC NOT IN CONTRACT		
F	FLEX CONDUIT		SWITCH DESIGNATOR
G	GROUND WIRE		SWITCH - SINGLE-POLE, MOUNT 48" AFF, UON
GFI	GROUND FAULT INTERRUPTER		
GND	GROUND		MOTOR CONNECTION
IG	ISOLATED GROUND		DOOR CONTACTS
OP	OVERHEAD POWER		JUNCTION BOX - CEILING-MOUNTED
OT	OVERHEAD TELCO		METER BASE - UTILITY COMPANY APPROVED
UP	UNDERGROUND POWER		MOTION SENSOR
UT	UNDERGROUND TELCO		OCCUPANCY SENSOR
WP	WEATHERPROOF		TRANSFORMER
	CONDUIT - BELOW GRADE		MECHANICAL EQUIPMENT TAG NUMBER REFER TO MECHANICAL EQUIPMENT SCHEDULE
	CONDUIT - CONCEALED		
	CONDUIT - FLEXIBLE		
	CONDUIT - STUB-DOWN		
	CONDUIT - STUB-OUT		
	CONDUIT - STUB-UP		
	HOME RUN. HASH MARKS INDICATE 2#12 WIRE UNLESS NOTED OTHERWISE		NOTE SYMBOL, REFER TO NOTE AS INDICATED
	CONDUCTORS IN CONDUIT, (2)#12 OR AS NOTED (QUANTITY AS INDICATED BY HASH MARKS)		FEEDER NUMBER, REFER TO "FEEDER SCHEDULE"
	GROUND WIRE		DETAIL HEADER
	GROUND CONNECTION		SECTION IDENTIFIER
	EQUIPMENT CONNECTION		DETAIL IDENTIFIER
	LIGHT FIXTURE - SURFACE-MOUNTED		
	LIGHT FIXTURE - WALL-MOUNTED		
	LIGHT FIXTURE - POLE-MOUNTED		
	LIGHT FIXTURE - STEP LIGHT		
	LIGHT FIXTURE - EXISTING ACORN STREET LIGHT		
	LIGHT FIXTURE - FLUORESCENT		

LUMINAIRE SCHEDULE

TYPE	EQUIPMENT DESCRIPTION	MOUNTING	LAMPS	BALLASTS	WATTS/LUMINAIRE	VOLTS
'A'	SURFACE WALL MOUNT LED, 8"W BY 15"H BY 4"D, HIGH IMPACT PEARLESCENT ACRYLIC LENS, ELECTRONIC DRIVER, WET LOCATION, VANDAL RESISTANT STAINLESS STEEL CAPTIVE, TAMPER RESISTANT TORX SCREWS TO RETAIN LENS/HOUSING. MANUFACTURER: KENALL FS512R 2TB PIA MB 9L40K 1 120 9500 OR APPROVED.	SURFACE	9W LED 4000K	ELECTRONIC DRIVER	9W	120
'B'	4' SURFACE MOUNTED LED, MARINE GRADE ALUMINUM HOUSING, MATTE BLACK FINISH, HIGH IMPACT PEARLESCENT ACRYLIC LENS, STAINLESS STEEL TAMPER RESISTANT FASTENERS, DAMP LOCATION RATED. ELECTRONIC DRIVER. MANUFACTURER: KENALL MLH48 48 R MB PP 50L40K DCC 1 DV CDF DL 9500 SERIES OR APPROVED.	SURFACE	50W LED ARRAY 4000K	ELECTRONIC DRIVER	50W	120
'C4'	POST-TOP HPS AREA LUMINAIRE, MOUNTED ON 14' POLE. PRISMATIC ACRYLIC GLOBE, TYPE 4 DISTRIBUTION, SPECULAR ALUMINUM TOP REFLECTOR, IP65 RATED LUMINAIRE, ELECTRONIC MVOLT BALLAST 120V/240V, CAST ALUMINUM 3"OD SLIPFITTER, BALLAST ENCLOSURE, GLOBE COLLAR AND FINIAL, BLACK FINISH. MANUFACTURER: HADCO S8539	POST-TOP	(1) 100W HPS	ELECTRONIC BALLAST	123W	240
'C5'	SIMILAR TO TYPE "C4", EXCEPT TYPE 5 DISTRIBUTION. MANUFACTURER: HADCO S8539	POST-TOP	(1) 100W	ELECTRONIC	123W	240
POLE	POLES FOR C4 AND C5 LUMINAIRES. MANUFACTURER: HADCO SP8539H. 5" DIAMETER STRAIGHT FLAT FLUTED, 6005-T5 EXTRUDED ALUMINUM. TENON/TOP, 3"OD, SAND CAST 356HM ALUMINUM. BASE, 356HM CAST ALUMINUM WITH 5"x8" ACCESS DOOR AND GROUND LUG. BASE AND POLE OVERALL LENGTH, 14'. FINISH, BLACK POLYURETHANE ENAMEL. PROVIDE ANTI-GRAFFITI FINISH AND SEALER.	BASE PLATE AND ANCHOR BOLTS SEE DETAIL 2/E200 FOR POLE BASE.				
'D'	BOLLARD STYLE PATHWAY LUMINAIRE. DIRECT EMBED SPUN-CAST CONCRETE, 8" DIAMETER, EXPOSED AGGREGATE, LOUVERED LUMINAIRE WITH INTERNALLY FASTENED CAST CONCRETE DECORATIVE CAP. DIE-CAST ALUMINUM LUMINAIRE AND LOUVERS, 8" DIAMETER. LED LIGHT ENGINE, 40W, 4000K, ELECTRONIC DRIVER. TYPE V ROUND DISTRIBUTION. CONCRETE BOLLARD, 72" OAL, 30" EMBED, 42" ABOVE GRADE. (2) 2-1/4"x9" CONDUIT ENTRIES AT 0-DEGREES AND 180-DEGREES, 18" BELOW GRADE. LUMINAIRE COLOR, SEMI-GLOSS BLACK. BOLLARD COLOR, BLACK WITH GRAFFITI RESISTANT COATING. AMERON L20RCC04LEPA/BER0842LC.	POST-TOP WITH CONCRETE CAP.	40W LED 4000K	ELECTRONIC DRIVER	42W	240

CONDUIT/CONDUCTOR SCHEDULE

TAG	LOAD	CONDUIT	CONDUCTORS	EQUIPMENT GROUND
①	ROADWAY/PARKING AREA 1 AND 2	3/4"	2-#10	#10
②	ROADWAY/PARKING AREA 1 AND 2	1"	2-#8	#8
③	ROADWAY/PARKING AREA 2	1"	2-#6	#6
④	PATHWAY AREA 2, 3 AND 4	3/4"	2-#10	#10
⑤	RESTROOM LIGHTING, INTERIOR/EXTERIOR, HAND DRYER AND RECEPTACLE	1"	4-#10 2-#10	#10
⑥	FUTURE AMPHITHEATER LIGHTING/POWER	2"	-	-
⑦	PGE SERVICE LATERAL	3"	-	-



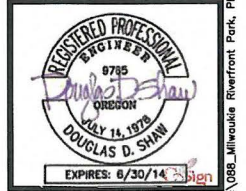
2100 SW River Parkway
Portland OR 97201
Phone: 503 223 6663
Fax: 503 223 2701

CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
		PUBLIC WORKS

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: ELECTRICAL LEGEND AND SCHEDULES

NO.	DATE	REVISION	BY	DOS
1	4/21/14			

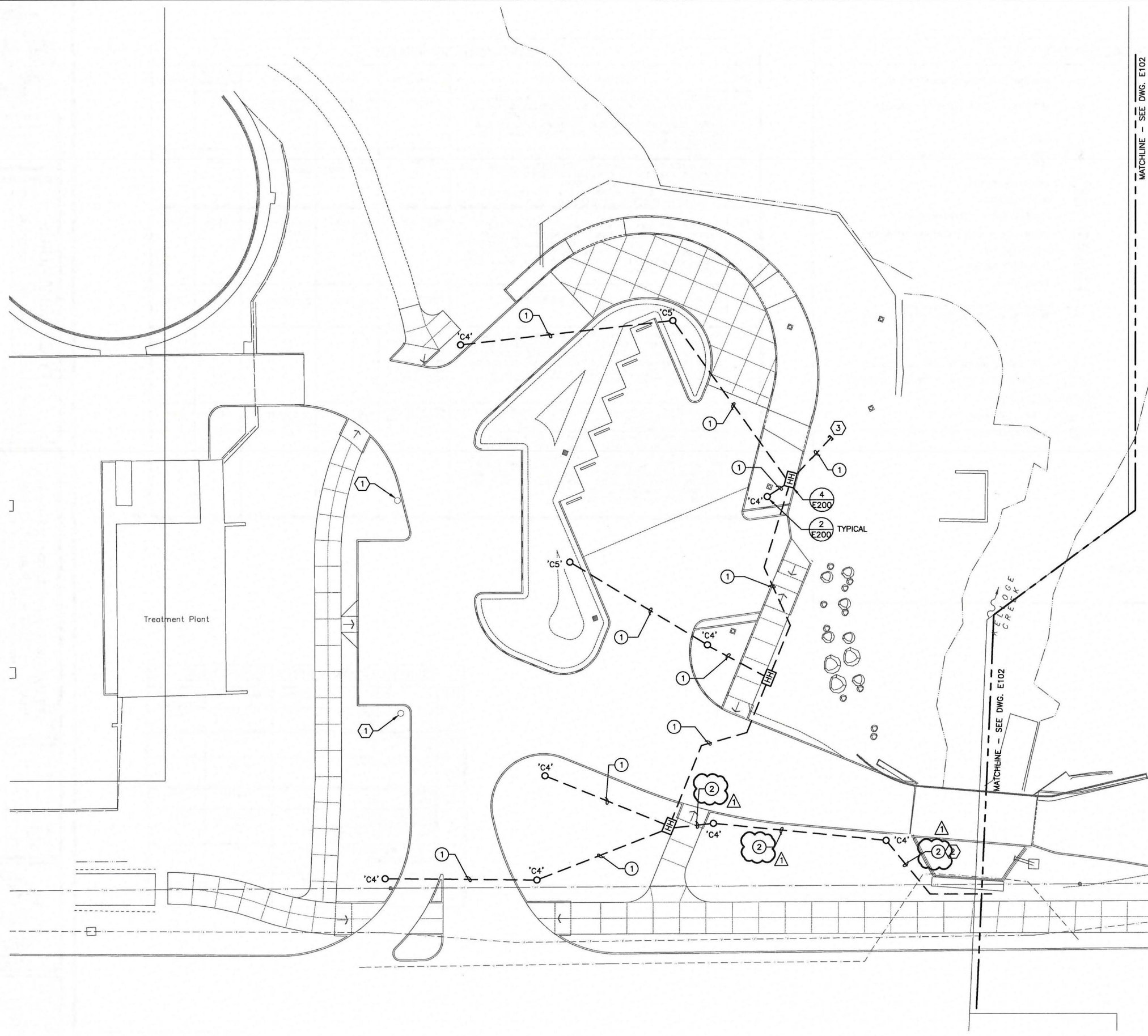


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DATE: 04-01-2014
DRN: CJD
CK: DDH

E100
JOB NO. MAEX0000-0021



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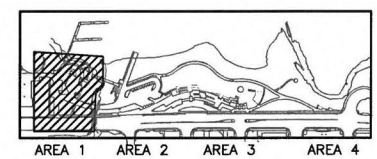


NOTES THIS SHEET

- ① EXISTING LUMINAIRE TO REMAIN. MAINTAIN CONTINUITY OF EXISTING LIGHTING BRANCH AND CONTROL.
- ② INSTALL CONDUIT BELOW KELLOGG CREEK CONCRETE BOX CULVERT.
- ③ CONDUIT STUBBED OUT FOR FUTURE LUMINAIRES.

MATCHLINE - SEE DWG. E102

① SITE PLAN - POWER - AREA 1
 E101 SCALE: 1"=20'-0"



KEYPLAN
 NOT TO SCALE

R&W
 ENGINEERING, INC.
 Engineering Integrated Solutions
 9615 S.W. Allen Boulevard
 Suite 107
 Beaverton, Oregon 97005
 Phone: (503) 726-3317
 Fax: (503) 726-3326
 E-mail: rweg@rweg.com
 Project No. 308 088 001 Contact: DENNIS HALL



2100 SW River Parkway
 Portland OR 97201
 Phone: 503 223 6663
 Fax: 503 223 2701

CITY OF MILWAUKIE	
DEPARTMENT	SIGNATURE
CITY LANDSCAPE ARCHITECT	APPROVAL DATE
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S. E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	PARTIAL SITE PLAN ELECTRICAL

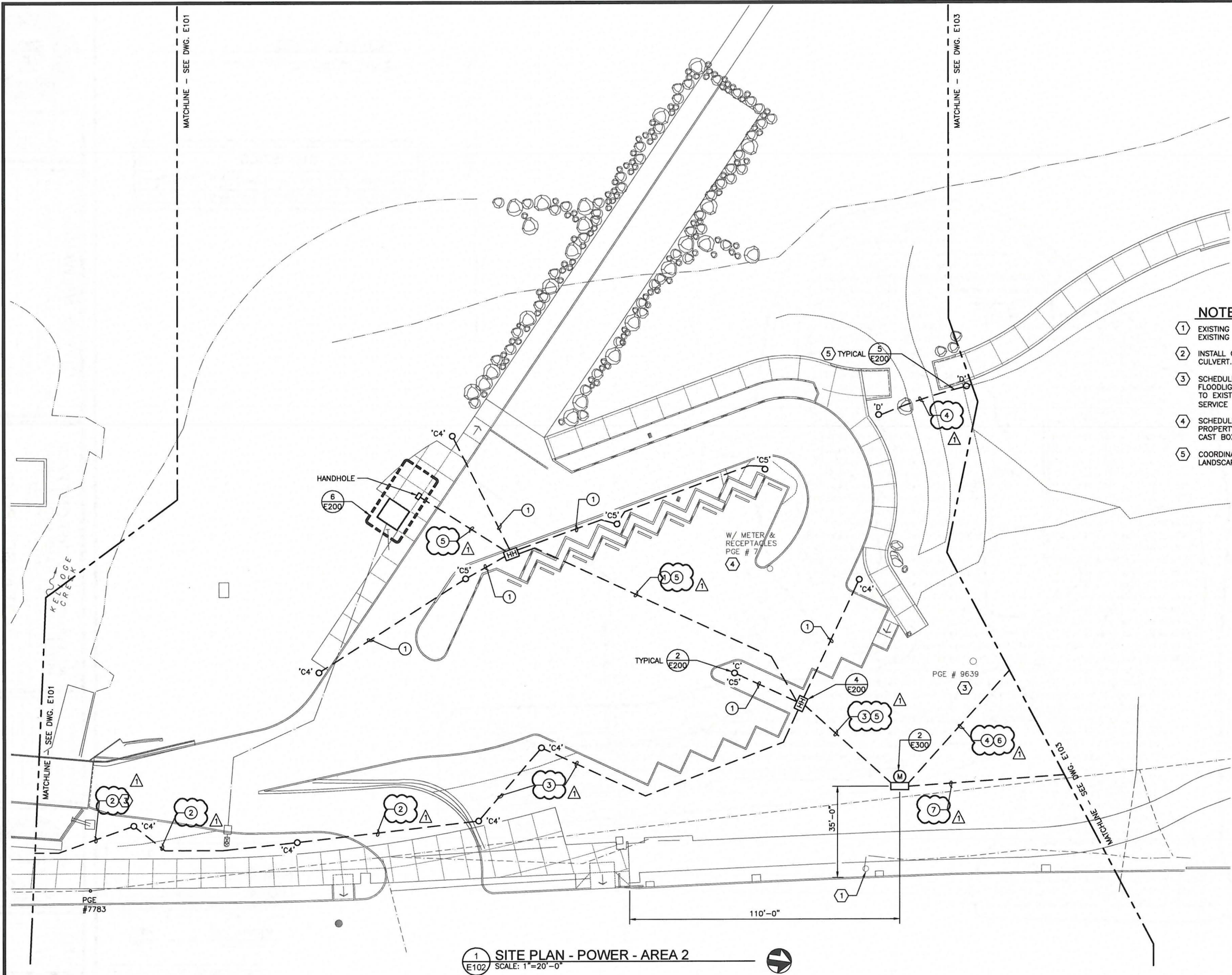
NO.	DATE	REVISION	BY
1	4/21/14		DBS



SCALE:	NOT TO SCALE
DATE:	04-01-2014
DRN:	CJD
CK:	DDH

E101
 JOB NO. MAEX0000-0021

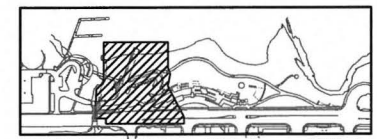
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NOTES THIS SHEET

- ① EXISTING LUMINAIRE TO REMAIN. MAINTAIN CONTINUITY OF EXISTING LIGHTING BRANCH CIRCUIT AND CONTROL.
- ② INSTALL CONDUIT BELOW KELLOGG CREEK CONCRETE BOX CULVERT.
- ③ SCHEDULE REMOVAL WITH PGE. POLE #9639 SUPPORTS ONE FLOODLIGHT LUMINAIRE, OVERHEAD TRIPLEX SERVICE FEEDER TO EXISTING RESTROOM STRUCTURE AND OVERHEAD TRIPLEX SERVICE FEEDER TO PGE POLE #7.
- ④ SCHEDULE REMOVAL WITH PGE. REMOVE CITY OWNED PROPERTY ATTACHED TO POLE, METERED SERVICE PANEL, FIVE CAST BOXES AND EIGHT RECEPTACLES.
- ⑤ COORDINATE FINAL LOCATION OF TYPE 'D' LUMINAIRES WITH LANDSCAPE ARCHITECT.

① SITE PLAN - POWER - AREA 2
SCALE: 1"=20'-0"



SCALE: NOT TO SCALE
DATE: 04-01-2014
DRN: CJD
CK: DDH

R&W ENGINEERING, INC.
9615 S.W. Allen Boulevard
Suite 107
Beaverton, Oregon 97005
Phone: (503) 726-3317
Fax: (503) 726-3326
E-mail: rweg@rweg.com
Project No.: 308.088.001 Contact: DENNIS HALL



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
	DEPARTMENT	APPROVAL DATE
CITY OF MILWAUKIE	CITY LANDSCAPE ARCHITECT	ARCHITECT
	COMMUNITY DEVELOPMENT	DEVELOPMENT
	PUBLIC WORKS	PUBLIC WORKS

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: PARTIAL SITE PLAN ELECTRICAL

NO.	DATE	REVISION	BY
1	4/21/14		DBS



SCALE: NOT TO SCALE
DATE: 04-01-2014
DRN: CJD
CK: DDH

E102
JOB NO. MAEX0000-0021

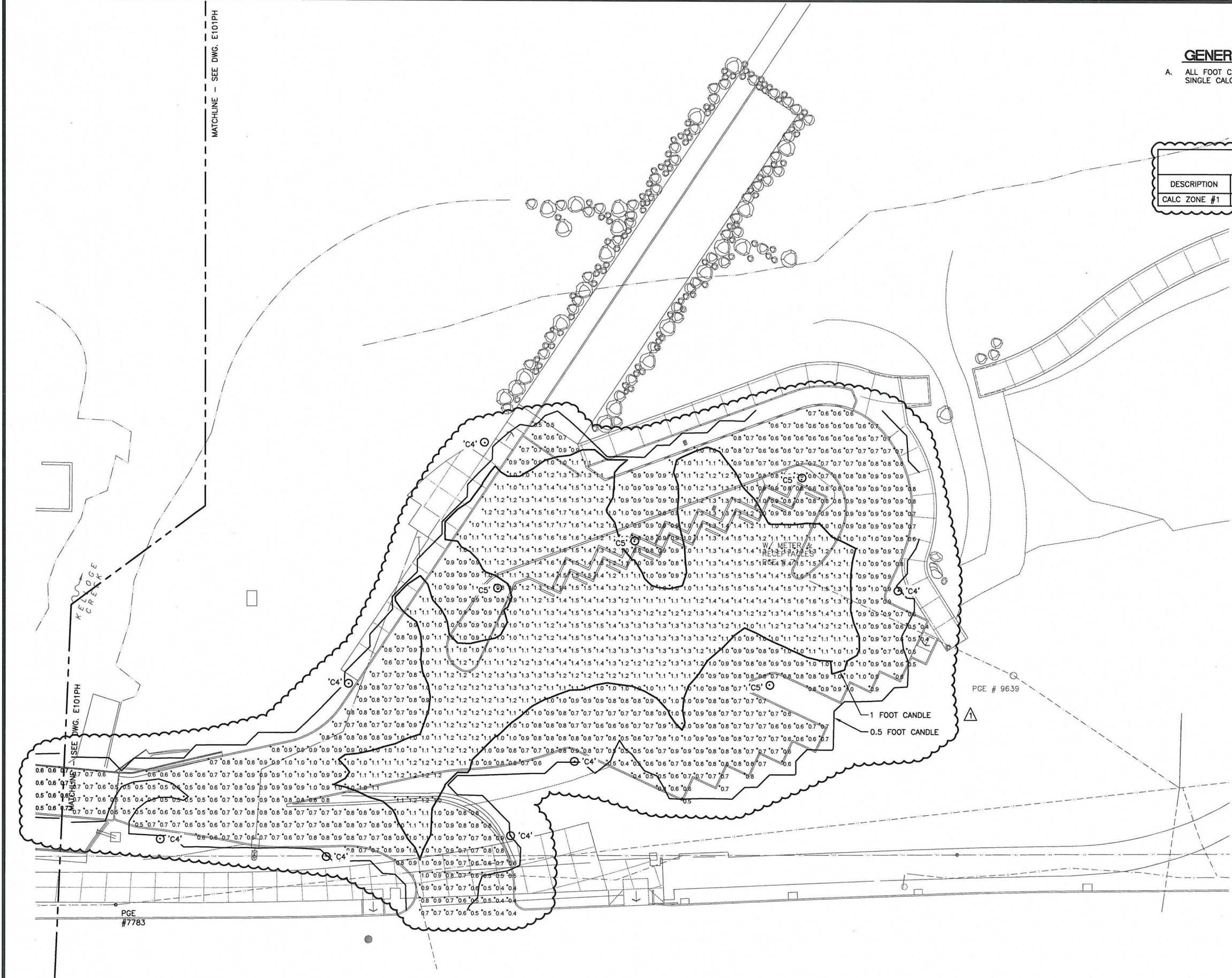


2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

GENERAL NOTES

A. ALL FOOT CANDLE CALCULATIONS ARE BASED ON A SINGLE CALCULATION ZONE.

STATISTICS						
DESCRIPTION	SYMB OL	AVG	MAX	MIN	MAX/MI n	AVG/MI n
CALC ZONE #1	+	1.0 fc	1.7 fc	0.4 fc	4.3:1	2.3:1
						0.6:1

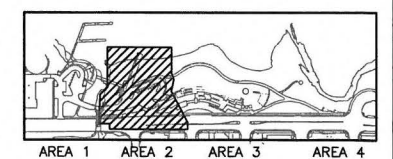


CITY OF MILWAUKIE	
DEPARTMENT	APPROVAL DATE
CITY LANDSCAPE ARCHITECT	
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	
SIGNATURE	

PROJECT
MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
PARTIAL SITE PLAN
PHOTOMETRIC

NO.	DATE	REVISION	BY	DWG.
1	4/21/14			



SCALE: NOT TO SCALE
DATE: 04-01-2014
DRN: CJD
CK: DDH

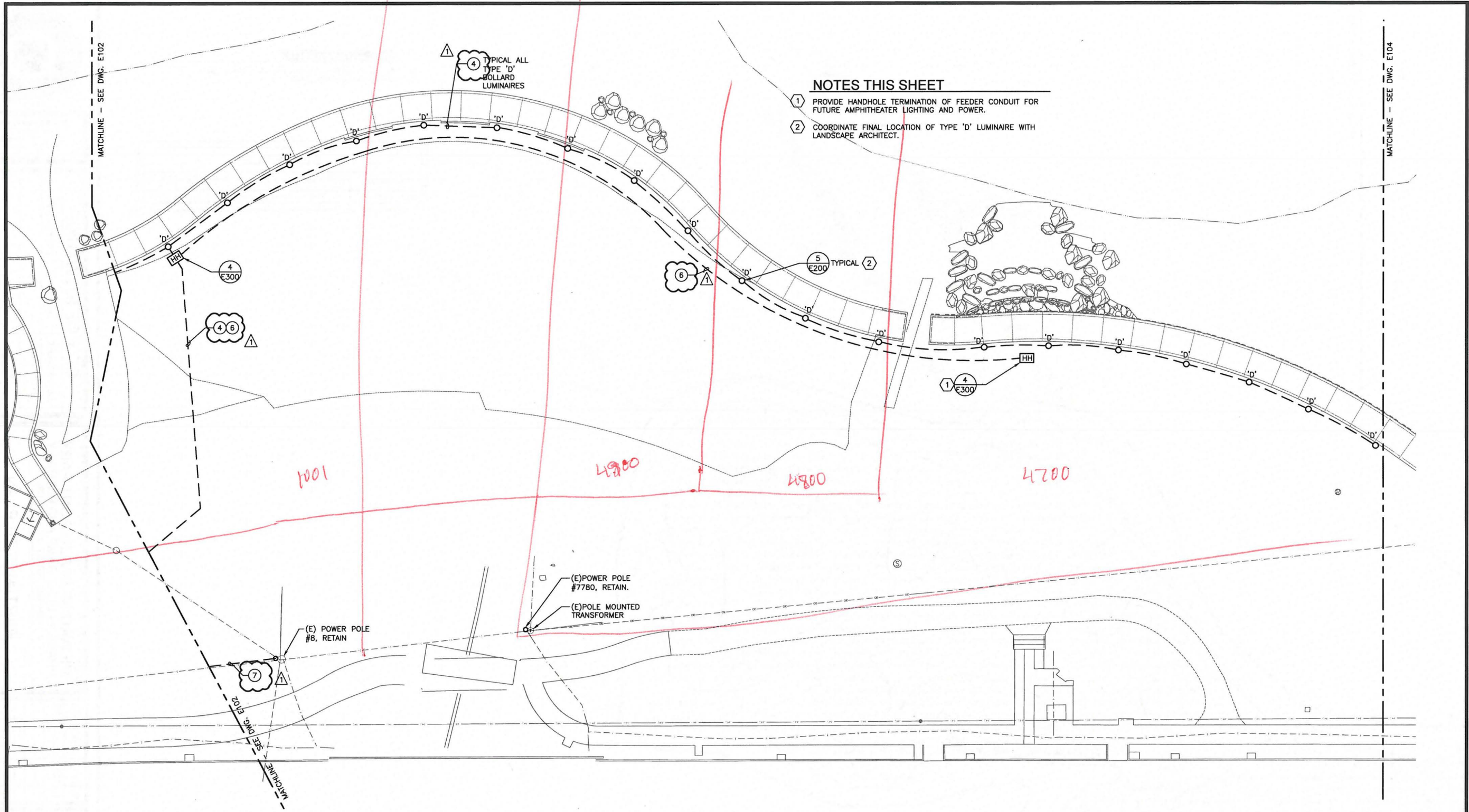
R&W
ENGINEERING, INC.
Engineering Integrated Solutions

9815 S.W. Allen Boulevard
Suite 107
Beaverton, Oregon 97005
Phone: (503) 726-3317
Fax: (503) 726-3328
E-mail: rweing@rweing.com

Project No. 308.088.001 Contact: DENNIS HALL

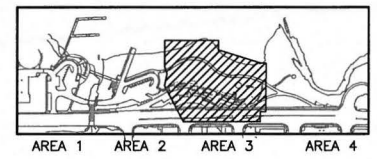
1 SITE PLAN - POWER - AREA 2
E102PH 1"=20'-0"

Drawing File: W:\V\W\Job_David Evans Assoc\088_Milwaukee Riverfront Park_Phase 2\001_Mechanical\CB\DWG\E102PH.dwg Date/Time: Apr 22, 2014 - 10:36am User: Evt



- NOTES THIS SHEET**
- ① PROVIDE HANDHOLE TERMINATION OF FEEDER CONDUIT FOR FUTURE AMPHITHEATER LIGHTING AND POWER.
 - ② COORDINATE FINAL LOCATION OF TYPE 'D' LUMINAIRE WITH LANDSCAPE ARCHITECT.

1 SITE PLAN - POWER - AREA 3
 E103 SCALE: 1"=20'-0"



R&W ENGINEERING, INC.
 "Engineering Integrated Solutions"
 9615 S.W. Allen Boulevard
 Suite 107
 Beaverton, Oregon 97005
 Phone: (503) 726-3317
 Fax: (503) 726-3326
 E-mail: rwen@rwen.com
 Project No.: 308.088.001 Contact: DENNIS HALL



2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

CITY OF MILWAUKIE	
DEPARTMENT	APPROVAL DATE
CITY LANDSCAPE ARCHITECT	
COMMUNITY DEVELOPMENT	
PUBLIC WORKS	
SIGNATURE	

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK
 SHEET TITLE: PARTIAL SITE PLAN ELECTRICAL

NO.	DATE	REVISION	BY
1	1/21/14		DOS



SCALE: NOT TO SCALE
DATE: 04-01-2014
DRN: CJD
CK: DDH

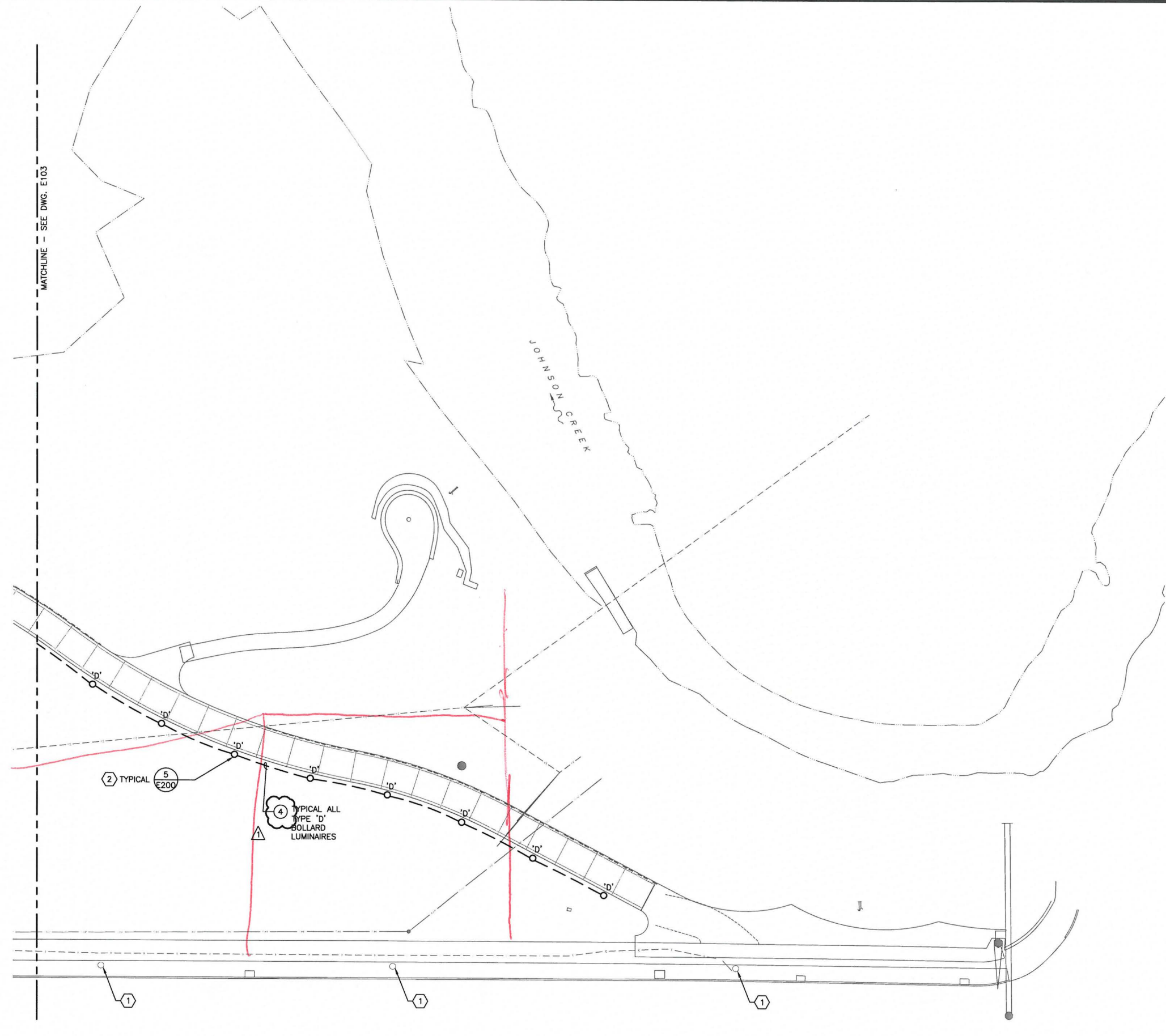
E103
 JOB NO. MAEX0000-0021



2100 SW River Parkway
 Portland OR 97201
 Phone: 503.223.6663
 Fax: 503.223.2701

NOTES THIS SHEET

- ① EXISTING LUMINAIRE TO REMAIN. MAINTAIN CONTINUITY OF EXISTING LIGHTING BRANCH CIRCUIT AND CONTROL.
- ② COORDINATE FINAL LOCATION OF TYPE 'D' LUMINAIRES WITH LANDSCAPE ARCHITECT.

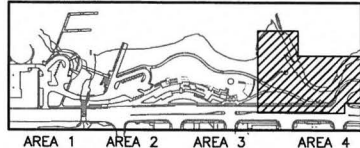
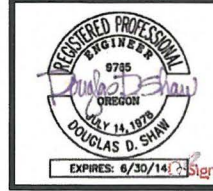


CITY OF MILWAUKIE		SIGNATURE	APPROVAL DATE
DEPARTMENT	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT
**MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY**
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
**PARTIAL SITE PLAN
 ELECTRICAL**

NO.	DATE	REVISION	BY
1	4/21/14		DDH



KEYPLAN
 NOT TO SCALE

R&W
 ENGINEERING, INC.
 Engineering Integrated Solutions
 9615 S.W. Allen Boulevard
 Suite 107
 Beaverton, Oregon 97005
 Phone: (503) 726-3317
 Fax: (503) 726-3025
 E-mail: rweing@rweing.com
 Project No. 308 088.001 Contact: DENNIS HALL

① **SITE PLAN - POWER - AREA 4**
 E104 SCALE: 1"=20'-0"

E104
 JOB NO. MAEX0000-0021

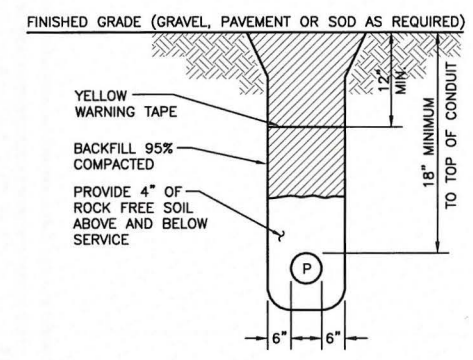
Drawing File: W:\WP_308_David Evans Assoc\088_Milwaukee Riverfront Park_Phase 2\001_Mechanical\088_DWG\E104.dwg Date/Time: Apr 22, 2014 - 10:30am User: E1



2100 SW River Parkway
Portland OR 97201
Phone: 503.223.6663
Fax: 503.223.2701

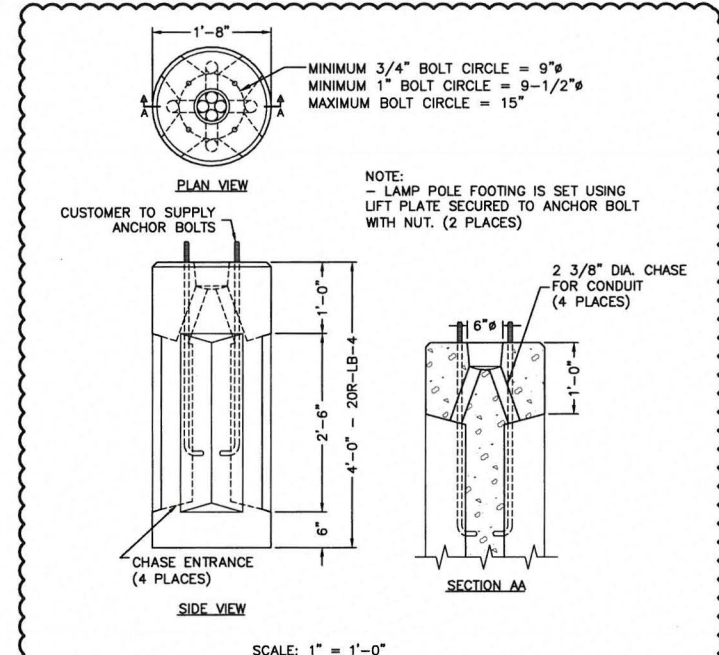
NOTES THIS SHEET

- ① SURFACE MOUNTED HAND DRYER.
- ② INSTALL CONDUIT FROM DEVICE TO HAND HOLE. ARRANGE CONDUITS SO THAT ACCUMULATED WATER IN CONDUIT DRAINS INTO DRY PUMP.



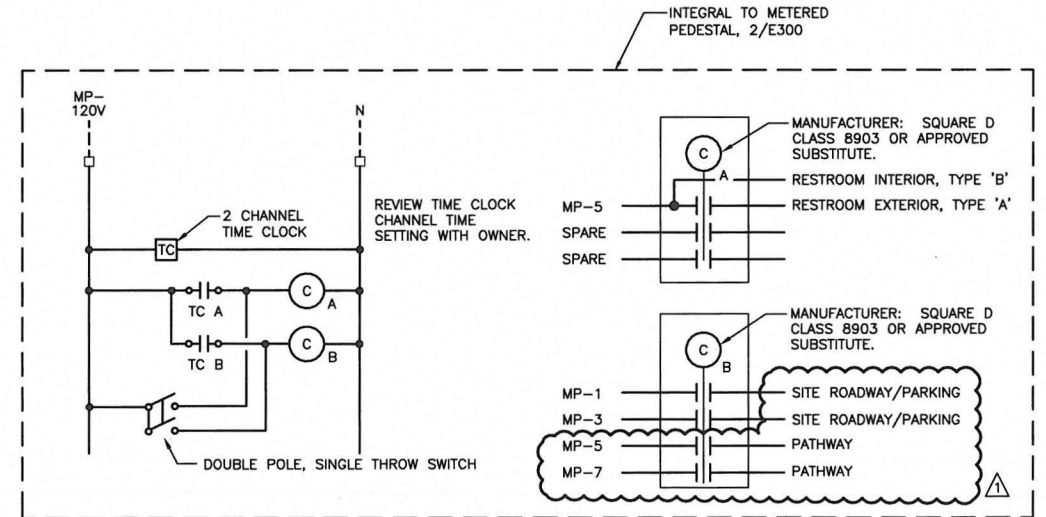
NOTE:
A. MAINTAIN 12" VERTICAL AND 24" HORIZONTAL CLEARANCE BETWEEN GAS AND OTHER UTILITIES.

① POWER CONDUIT TRENCH DETAIL
E200 NOT TO SCALE

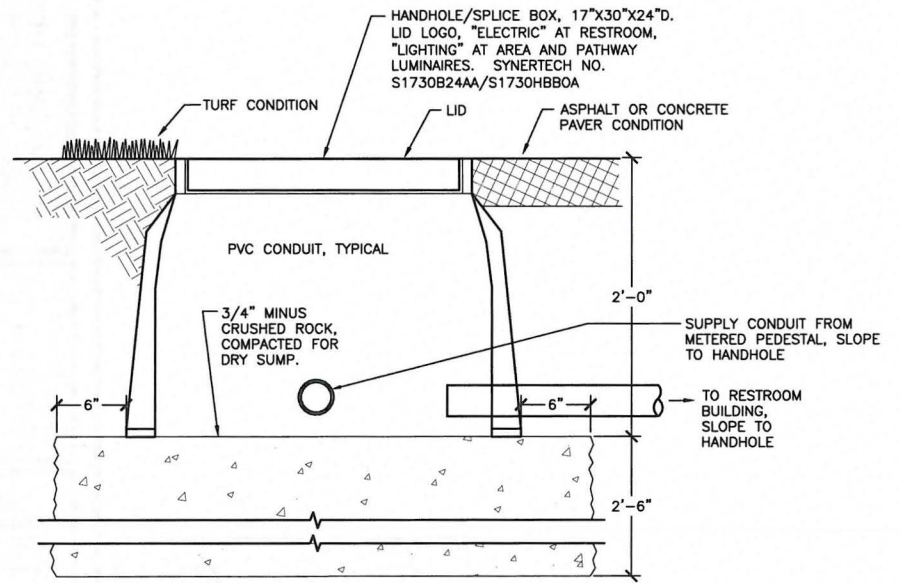


SCALE: 1" = 1'-0"
Oldcastle Precast
20R-LB PRECAST FOOTING FOR LAMP POLE
20R-LB PRECAST FOOTING FOR LAMP POLE

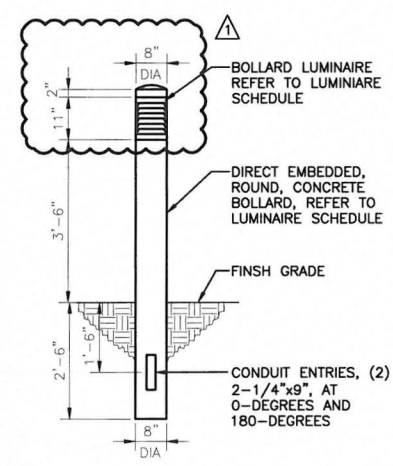
② LIGHT POLE BASE DETAIL
E200 NOT TO SCALE



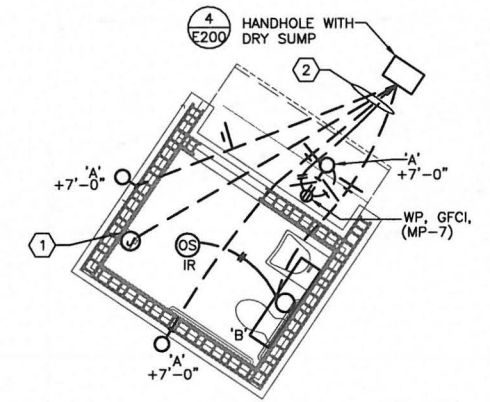
③ LIGHTING CONTROL DIAGRAM
E200 NOT TO SCALE



④ FLUSH HANDHOLE/SPLICE BOX
E200 NOT TO SCALE



⑤ BOLLARD LUMINAIRE
SCALE: 1/2" = 1'-0"



⑥ SINGLE RESTROOM - ELECTRICAL
SCALE: 1/4" = 1'-0"

CITY OF MILWAUKIE	APPROVAL DATE	
	SIGNATURE	
DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
		PUBLIC WORKS

PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE: RESTROOM PLAN & ELECTRICAL DETAILS

NO.	DATE	REVISION	BY
1	11/21/14		DBS



SCALE: 1/4"=1'-0"
DATE: 04-01-2014
DRN: CJD
CK: DDH

E200
JOB NO. MAEX0000-0021





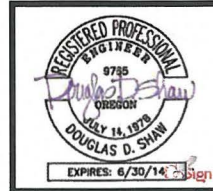
2100 SW River Parkway
Portland OR 97201
Phone: 503 223 6663
Fax: 503 223 2701

CITY OF MILWAUKIE	DEPARTMENT	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT	SIGNATURE
	COMMUNITY DEVELOPMENT	APPROVAL DATE
	PUBLIC WORKS	SIGNATURE

PROJECT: MILWAUKIE RIVERFRONT PARK
PHASE 2 - BOAT RAMP AND PATHWAY
S.E. HARRISON STREET - KELLOGG CREEK

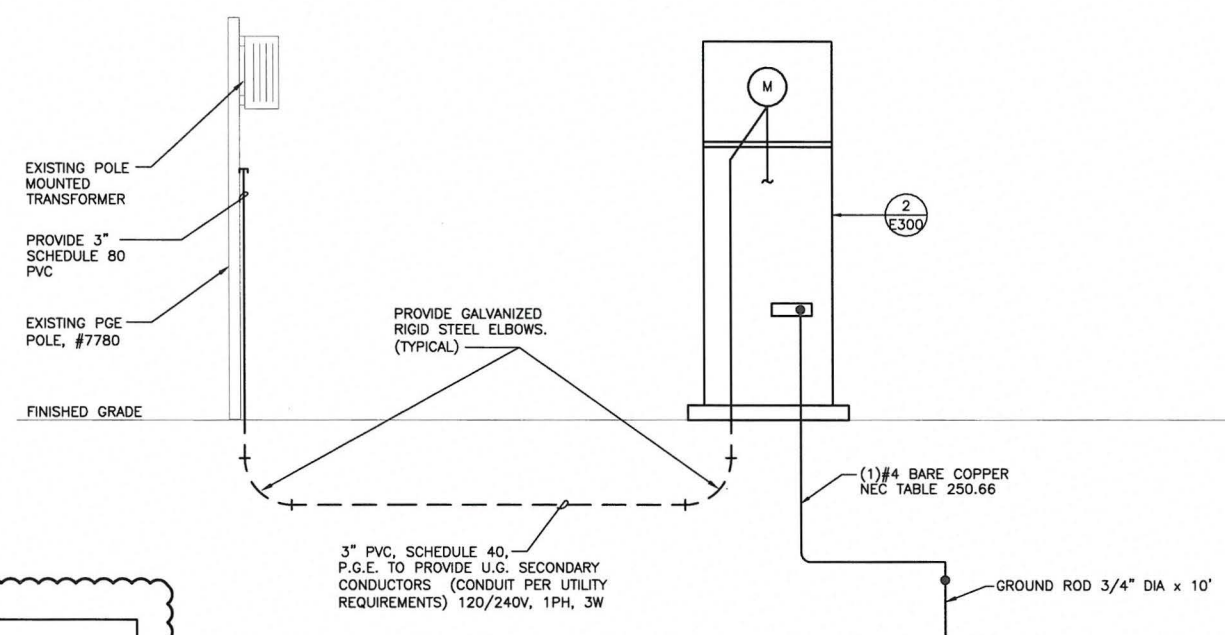
SHEET TITLE: ELECTRICAL DISTRIBUTION DIAGRAM AND SCHEDULES

NO.	DATE	BY	REVISION
1	4/21/14	DDH	



SCALE: NOT TO SCALE
DATE: 04-01-2014
DRN: CJD
CK: DDH

E300
JOB NO. MAEX0000-0021



1 ELECTRICAL ONE-LINE DIAGRAM
E300 120/240V, 1PH, 3 WIRE

INCOMING ELECTRICAL SERVICE DIVISION OF RESPONSIBILITY					
	ELEC. CONTR.	UTILITY CO.		ELEC. CONTR.	UTILITY CO.
PRIMARY CONDUIT	<input type="checkbox"/>	<input type="checkbox"/>	SECONDARY CONDUIT	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PRIMARY CONDUCTORS	<input type="checkbox"/>	<input type="checkbox"/>	SECONDARY CONDUCTORS	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TRANSFORMER	<input type="checkbox"/>	<input type="checkbox"/>	C/T ENCLOSURE	<input type="checkbox"/>	<input type="checkbox"/>
TRANSFORMER PAD	<input type="checkbox"/>	<input type="checkbox"/>	C/T'S	<input type="checkbox"/>	<input type="checkbox"/>
PRIMARY GROUNDING	<input type="checkbox"/>	<input type="checkbox"/>	METER BASE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BOLLARDS	<input type="checkbox"/>	<input type="checkbox"/>	METER	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TRANSFORMER CONNECTIONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	METER GROUNDING	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ELECTRIC ROOM DOOR LOCK BOX (OBTAIN FROM POWER COMPANY)	<input type="checkbox"/>	<input type="checkbox"/>			

NOTES:
1. CONTACT AND COORDINATE ALL REQUIREMENTS AND RESPONSIBILITIES WITH SERVING UTILITY COMPANIES PRIOR TO SUBMITTING BID.
2. ALL SERVICE INSTALLATION WORK SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE SERVING UTILITIES.

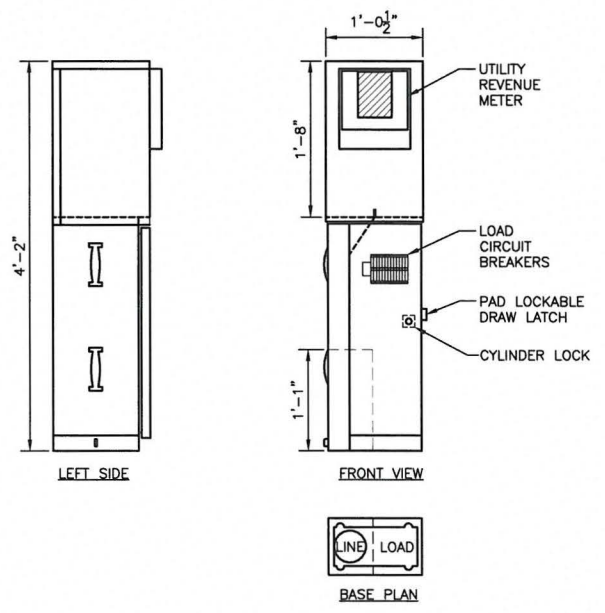
POWER UTILITY CONTACT:
Toby Anderson
Portland General Electric
3700 SE 17th Avenue
Portland, OR 97202
PHONE: (503) 963-9894
EMAIL: Toby.Anderson@pge.com

LOAD SUMMARY							
PANEL	LIGHTING	RECEPTACLES	KITCHEN	MOTOR	GENERAL/MISC.	ELEC. HEAT	TOTAL
PANEL "MP"	13561	180	0	0	0	1200	14941
CONNECTED (VA)	13561	180	0	0	0	1200	14941
LARGEST MOTOR (*1.25)				0			
CODE FACTOR	1.25	10K+50%	0.65	1.00	1.25	1.00	
CALCULATED (VA)	16951	180	0	0	0	1200	18331
TOTAL CONNECTED	14941						
	Ⓢ120/240V, 1PH	62.25	AMPS				
TOTAL DEMAND	18331						
	Ⓢ120/240V, 1PH	76.38	AMPS				

JOB #308.077.001
MILWAUKIE RIVERFRONT PARK
4/17/14

PANEL: MP (METERED PEDESTAL) BUS: 100A VOLTAGE: 120/240V, 1PH, 3 WIRE											
FEEDER: SEE POWER RISER			MAIN BRKR: 60A			MOUNTING: SURFACE					
CKT NO.	CIRCUIT DESCRIPTION	CKT BREAKER AMPS/POLES	LOAD TYPE	LOAD VOLT-AMPS	PHASE	LOAD VOLT-AMPS	LOAD TYPE	CKT BREAKER AMPS/POLES	CIRCUIT DESCRIPTION	CKT NO.	
1	SITE LIGHTING-ROADWAY/PARKING	20-2	L	1292	A	600	H	20-2	HAND DRYER	2	
3	SITE LIGHTING-ROADWAY/PARKING	--	L	1292	C	600	H	--	HAND DRYER	4	
5	SITE LIGHTING - PATHWAY	20-2	L	450	A	5000	L	60-2	FUTURE AMPHITHEATER	6	
7	SITE LIGHTING - PATHWAY	--	L	450	C	5000	L	--	FUTURE AMPHITHEATER	8	
9	RESTROOM LTG. (INT-UNSW, EXT-T.C. CONTROL)	20-1	L	77	A				SPACE	10	
11	RECEPTACLE	20-1	R	180	C				SPACE	12	

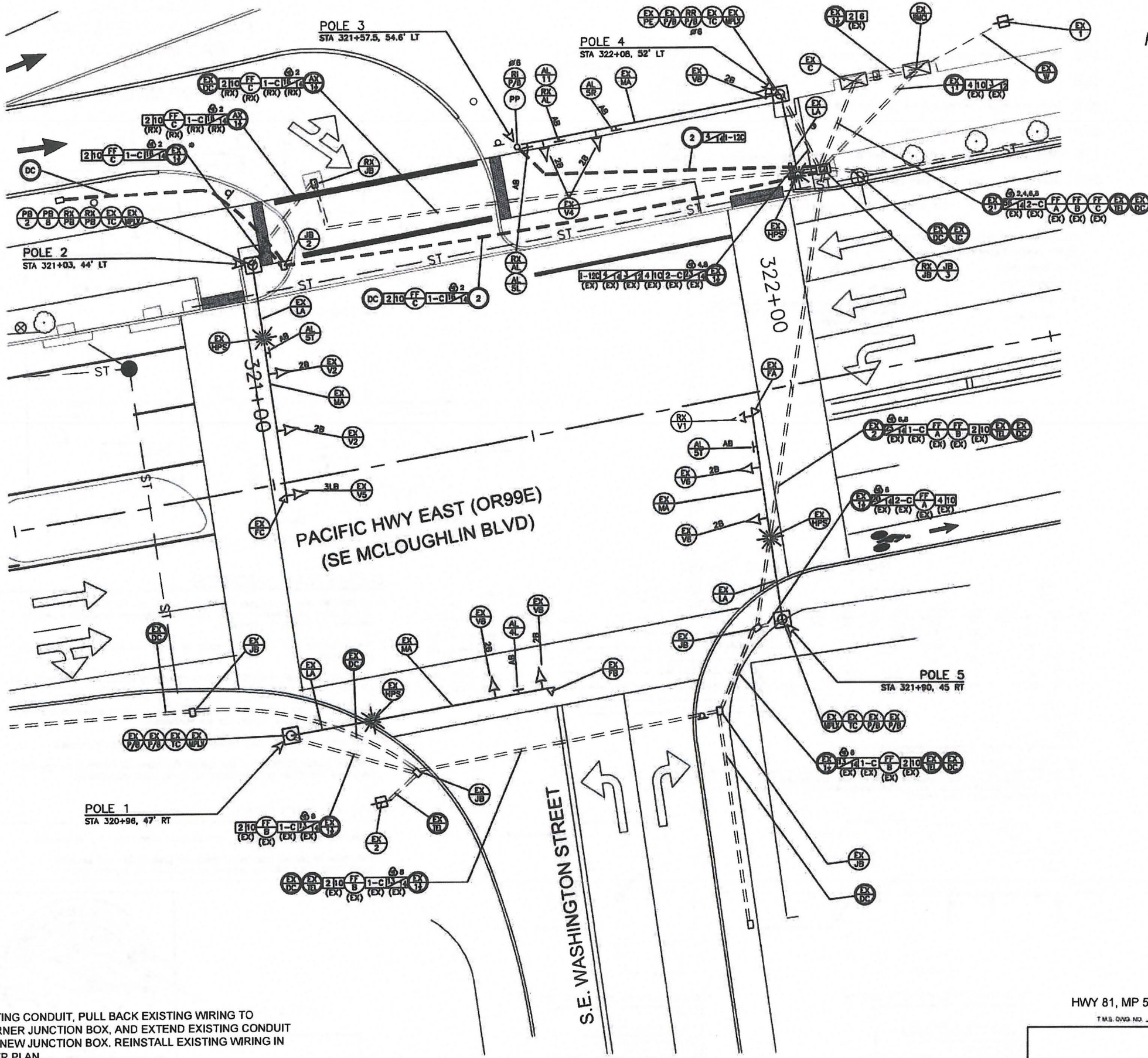
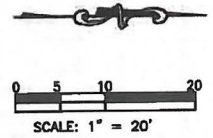
CONNECTED LOAD				DEMAND LOAD			NOTES.....			
LOAD PER PHASE (VA)	A=	7419.00	LIGHTING	13561	125%	16951.25	1.				
	C=	7522.00	RECEPT.	180	10K+50%	180	2.				
			KITCHEN	0	65%	0					
LOAD PER PHASE (AMPS)	A=	61.83	MOTOR	0	100%	0	3.				
	C=	62.68	GENERAL	0	125%	0					
			HEAT	1200	100%	1200	4.				
			LG MOTOR	0	125%	0					
TOTAL LOAD (KVA)		14.94	TOTAL LOAD (KVA)			18.33		JOB #308.088.001			
TOTAL AMPS		62.25	TOTAL AMPS			76.38		MILWAUKIE RIVERFRONT PARK			
			DATE			17-Apr-14					



2 METERED PEDESTAL SERVICE
E300 120/240V, 1PH, 3 WIRE



Drawing File: \\NF_308_David_Evans_Assoc\08_Milwaukee_Riverfront_Park_Phase 2\01_Mechanical CDS\DWG\E300.dwg Date/Time: Apr 22, 2014 - 10:31am User: Ev



**SIGNAL PLAN
PACIFIC HWY EAST AT
WASHINGTON ST
OR99E AT MP 5.93
(CITY OF MILWAUKIE)**



321 SW 4th Avenue, Ste 400,
Portland OR 97204
Phone: 503 248 0313
Fax: 503 248 9251

CITY OF MILWAUKIE		SIGNATURE	APPROVAL DATE
DEPARTMENT	CITY LANDSCAPE ARCHITECT		
	COMMUNITY DEVELOPMENT		
	PUBLIC WORKS		

PROJECT	MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY S.E. HARRISON STREET - KELLOGG CREEK
SHEET TITLE	TRAFFIC SIGNAL MODIFICATION SIGNAL PLAN

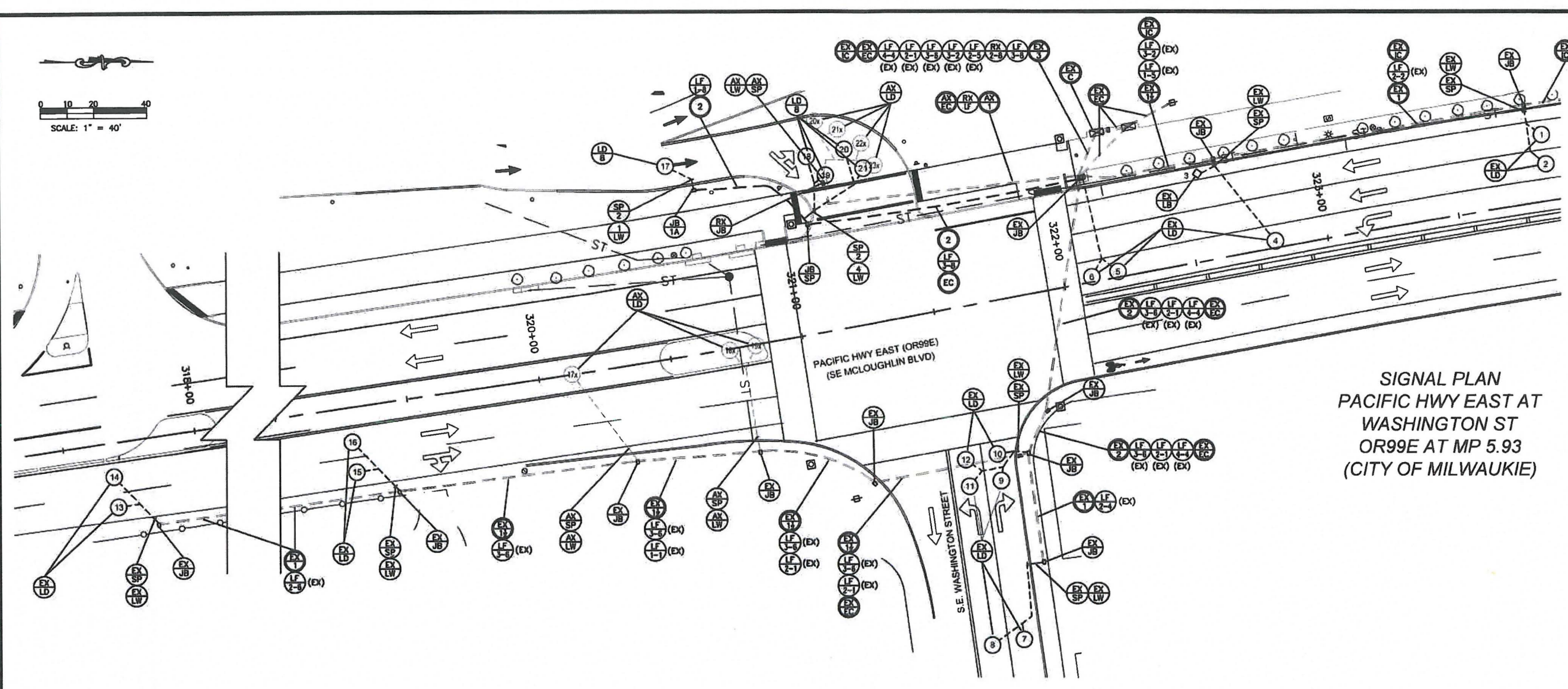
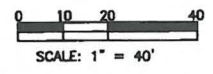
NO	DATE	REVISION	BY

* INTERCEPT EXISTING CONDUIT, PULL BACK EXISTING WIRING TO NORTHWEST CORNER JUNCTION BOX, AND EXTEND EXISTING CONDUIT FROM POLE 2 TO NEW JUNCTION BOX. REINSTALL EXISTING WIRING IN NEW CONDUIT PER PLAN.

HWY 81, MP 5.93
T.M.S. DWG. NO. _____
OOOT Traffic Engineering and Operations Section Approval

SCALE	AS SHOWN
DATE	03-20-2015
DRN	WRF/KTP
CK	MTA

TS2
JOB NO 14186



SIGNAL PLAN
 PACIFIC HWY EAST AT
 WASHINGTON ST
 OR99E AT MP 5.93
 (CITY OF MILWAUKIE)

LOOP DIAGRAM

LOOP NUMBER	DISTANCE FEET	PHASE	SLOT
1	(EX)	2	I2U
2	(EX)	2	I2L
3	(EX)	2	I3L
4	(EX)	5	J1U
5	(EX)	S	J9U
6	(EX)	4	I6U
7	(EX)	4	I6L
8	(EX)	4	I7L
9	(EX)	S	J7U
10	(EX)	4	I7U
11	(EX)	S	J2U
12	(EX)	6	J2L
13	(EX)	6	J3U
14	(EX)	6	J3U
15	(EX)	6	J3U
16	(EX)	6	J3U
17x	(EX)	1	I1U
18x	(EX)	S	I9U
19x	(EX)	S	I9U
20x	(EX)	S	J8U
21x	(EX)	S	J8U
22x	(EX)	S	J8L
23x	(EX)	S	J8L
17	85	8	J8U
18	15	S	J7U
19	5	8	J7U
20	15	S	J7L
21	5	8	J7L

XFER TO I8 W/ DELAY
 CONTROLLER CABINET
 EXISTING LOOPS TO BE ABANDONED
 XFER TO J8

S = SERIES, E = EXTENSION, C = CALL, CO = CARRY-OVER, D = DELAY

LEGEND

- (EX DB) Retain and protect existing diamond bicycle detector loop.
- (EX LV) Retain and protect existing vehicle detector loop.
- (LD Ph) Install phase (Ph=phase) 6" round vehicle detector loop.
- (LF X-Ph) Retain and protect existing (X=number of cables) phase (Ph=phase) loop feeder cables.
- (LF X-Ph) Install (X=number of cables) phase (Ph=phase) loop feeder cables.
- (EX LW) Retain and protect existing loop wires.
- (N LW) Install (N=number) pair of loop wires.
- (EX SP) Retain and protect existing sand pocket.
- (SP S) Install 6" max. sand pocket block-out with (S=size)" conduit to junction box.
- (EX JB) Retain and protect existing junction box.
- (RX JB) Remove existing precast concrete junction box (see signal plan).
- (JB 1A) Precast concrete junction box (see signal plan).
- (JB 1A) Install 12"x10"x12" (min. dimension) precast concrete junction box with concrete apron.
- (EX C) Retain and protect existing traffic signal controller.
- (AX SP) Abandon existing sand pocket.
- (AX LW) Abandon existing loop wires.
- (RX LF) Remove existing loop feeder cables.
- (RX LF-Ph) Remove existing (X=number of cables) phase (Ph=phase) loop feeder cables.
- (AX LV) Abandon existing vehicle detector loop.
- (AX EC) Abandon existing electrical conduit.
- (AX S) Abandon existing (S) inch electrical conduit.
- (EX EC) Retain and protect existing electrical conduit.
- (EX IC) Retain and protect existing interconnect conduit.
- (EX S) Retain and protect existing (S) inch electrical conduit.
- (S) Install (S=size) inch electrical conduit.
- (EC) Install electrical conduit (See Signal Plan).

HWY 81, MP 5.93
 T.M.S. DWG NO.

LANCASTER engineering
 321 SW 4th Avenue, Ste 400, Portland OR 97204
 Phone: 503 248 0313 Fax: 503 248 9251

CITY OF MILWAUKIE	SIGNATURE	APPROVAL DATE
DEPARTMENT	CITY LANDSCAPE ARCHITECT	COMMUNITY DEVELOPMENT
PUBLIC WORKS		

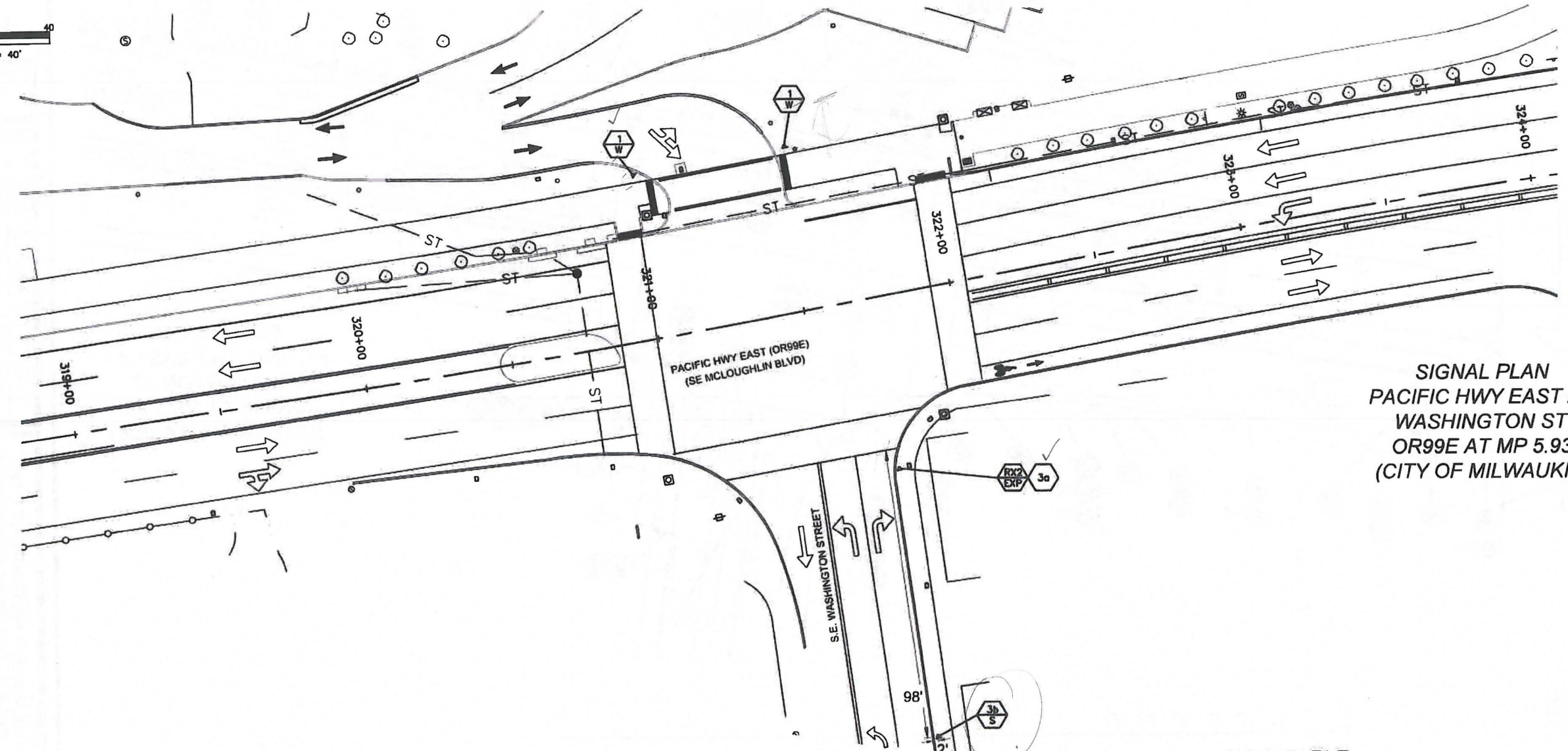
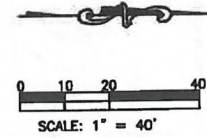
PROJECT: MILWAUKIE RIVERFRONT PARK PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE: TRAFFIC SIGNAL MODIFICATION DETECTOR PLAN

NO	DATE	REVISION	BY

SCALE: AS SHOWN
 DATE: 03-20-2015
 DRN: WRF
 CK: MTA

TS3
 JOB NO. 14186

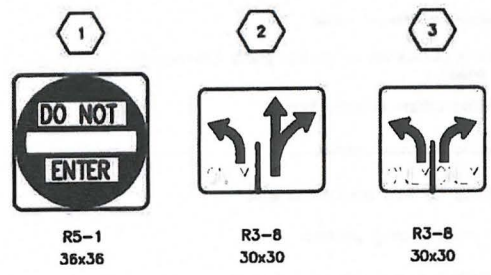


**SIGNAL PLAN
PACIFIC HWY EAST AT
WASHINGTON ST
OR99E AT MP 5.93
(CITY OF MILWAUKIE)**

SIGN TABLE

SIGN NO.	QUANTITY	PANEL	LEGEND	SIGN SPEC.	SIZE	SUPPORT INFO
1	2	1	Do Not Enter symbol	R5-1	36"x36"	4"x6"x16" Wood Post (2)
2	Existing	1	Left Arrow ONLY / Through-Right Arrow lane use sign	R3-B	30"x30"	Existing Square Tube
3a	1	1	Left Arrow ONLY / Right Arrow ONLY lane use sign	R3-B	30"x30"	Existing Square Tube
3b	1	1	Left Arrow ONLY / Right Arrow ONLY lane use sign	R3-B	30"x30"	2"-12 ga. Square Tube

TRAFFIC SIGN NUMBER LEGEND



- TRAFFIC SIGN BUBBLE LEGEND**
- INSTALL NEW SIGN (N)
 - INSTALL NEW SIGN (N) ON SIGN SUPPORT (M)
 - REMOVE EXISTING SIGN (N) AND PROTECT EXISTING SIGN SUPPORT (M)

N = SIGN NUMBER. SEE "TRAFFIC SIGN NUMBER LEGEND" FOR NUMBERS.
 M = MATERIAL FOR POLE OR POST
 MATERIAL OPTIONS:
 S = STEEL
 W = WOOD POST



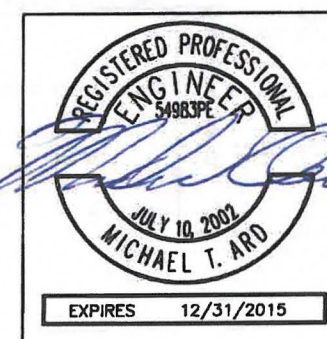
321 SW 4th Avenue, Ste 400,
 Portland OR 97204
 Phone: 503 248 0313
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CITY OF MILWAUKIE	DEPARTMENT	APPROVAL DATE
	CITY LANDSCAPE ARCHITECT	SIGNATURE
	COMMUNITY DEVELOPMENT	
	PUBLIC WORKS	

PROJECT
 MILWAUKIE RIVERFRONT PARK
 PHASE 2 - BOAT RAMP AND PATHWAY
 S.E. HARRISON STREET - KELLOGG CREEK

SHEET TITLE
 TRAFFIC SIGNAL MODIFICATION
 SIGNING PLAN

NO.	DATE	BY	REVISION



SCALE: AS SHOWN
 DATE: 03-20-2015
 DRN: WRF/KTP
 CK: MTA

TS4
 JOB NO 14186