

CITY OF FERNDALE, WASHINGTON

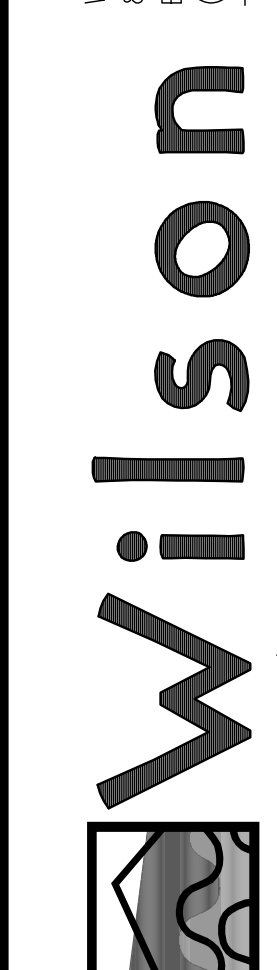
THIRD AVENUE STORMWATER IMPROVEMENTS

CITY PROJECT NO. ST2014-02

FUNDED IN PART BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

NO.	REVISIONS	BY	DATE

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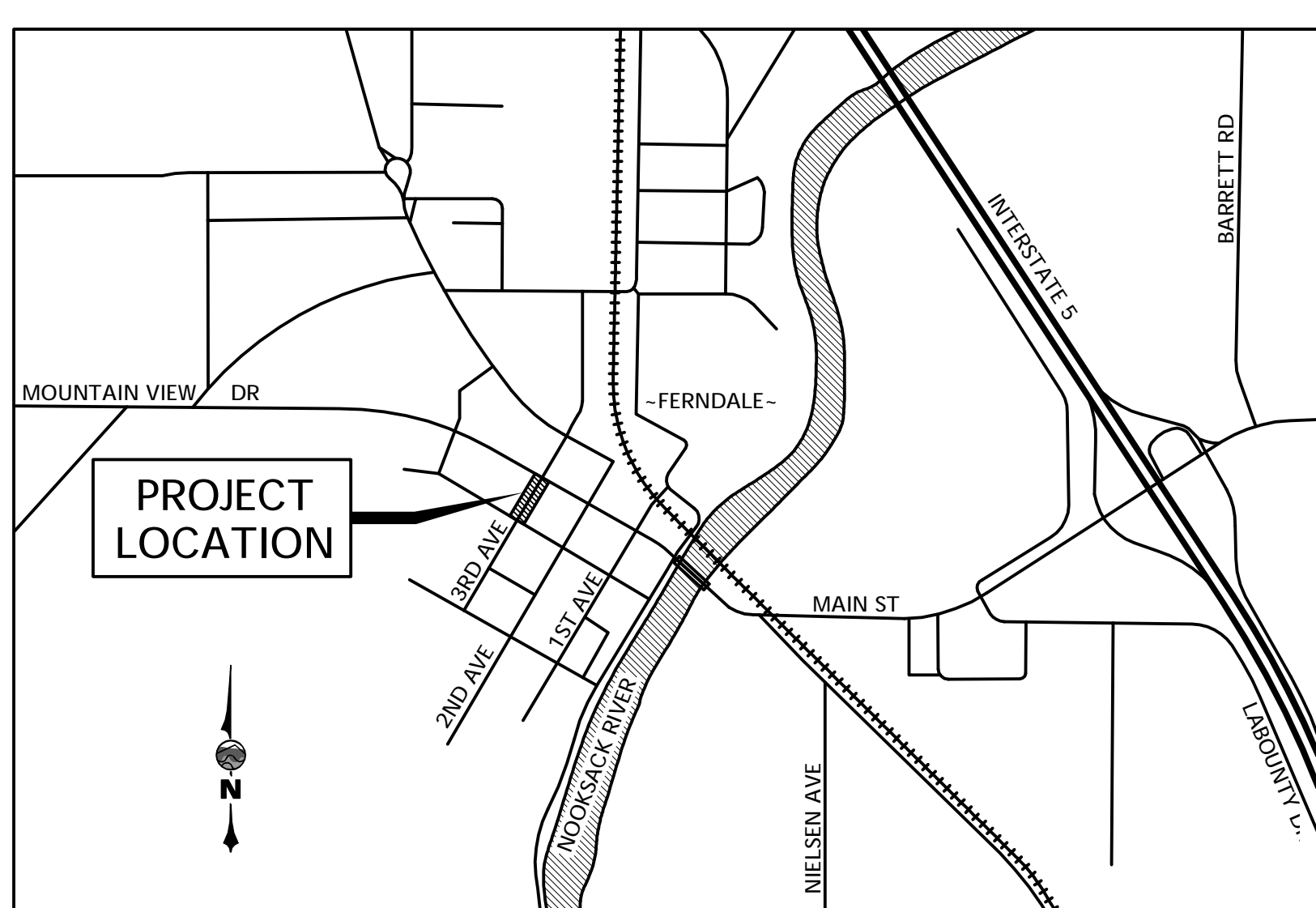


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WASHINGTON
CITY OF FERNDALE, WA
THIRD AVENUE STORMWATER IMPROVEMENTS
COVER SHEET

FOR CONSTRUCTION
DATE: 4-10-2017
SCALE: AS SHOWN
JOB NUMBER: 2014-014

VICINITY MAP - NOT TO SCALE



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GENERAL NOTES

- 1) CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
 - 2) IF THERE ARE ANY DISCREPANCIES BETWEEN DIMENSIONS IN DRAWING AND EXISTING CONDITIONS WHICH WILL AFFECT THE WORK, THE CONTRACTOR SHALL BRING SUCH DISCREPANCIES TO THE ATTENTION OF THE ENGINEER FOR ADJUSTMENT BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF ALL WORK AND FOR THE COORDINATION OF ALL TRADES, SUBCONTRACTORS, AND PERSONS ENGAGED UPON THIS CONTRACT.
 - 3) CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ANY EXISTING IMPROVEMENTS OR UNDERGROUND FACILITIES DAMAGED BY HIM, HIS SUBCONTRACTORS, OR HIS MATERIAL SUPPLIERS WITHIN 48 HOURS OF THE DAMAGE OCCURRENCE AND/OR AS REQUIRED BY THE CONSTRUCTION INSPECTOR.
 - 4) EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH. THE ENGINEER ASSUMES NO RESPONSIBILITY THAT THE UTILITIES AND UNDERGROUND FACILITIES WILL BE THE UTILITIES AND UNDERGROUND FACILITIES ENCOUNTERED.
 - 5) THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS OF THE EXISTING STORM DRAINS, SEWERS, AND WATER TO BE EXTENDED, CROSSED, OR CONNECTED TO PRIOR TO COMMENCING THE WORK. NOTIFY ENGINEER IF ACTUAL IS DIFFERENT FROM PLANS.
 - 6) ALL TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE APPLICABLE SECTIONS OF WASHINGTON AND FEDERAL OSHA REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION.
 - 7) THE CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING STREETS, SURROUNDING LANDSCAPE, AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, SIDEWALKS, GRADING, ETC. AND TO AVOID ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES, LOW SPOTS, OR HAZARDOUS CONDITIONS.
 - 8) CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING PERMITS FROM THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES FOR REMOVING AND REPLACING ALL SURVEY MONUMENTATION THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITY, PURSUANT TO WAC 332-120. APPLICATIONS MUST BE COMPLETED BY A REGISTERED LAND SURVEYOR. APPLICATIONS FOR PERMITS TO REMOVE MONUMENTS MAY BE OBTAINED FROM THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES (DNR), OR BY CONTACTING THEIR OFFICE BY TELEPHONE AT (206) 902-1190.
- WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES
PUBLIC LAND SURVEY OFFICE
1111 WASHINGTON STREET S.E.
OLYMPIA, WASHINGTON 98504-7060
- UPON COMPLETION OF CONSTRUCTION, ALL MONUMENTS DISPLACED, REMOVED, OR DESTROYED SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR, AT THE COST OF THE CONTRACTOR, PURSUANT TO THESE REGULATIONS. THE APPROPRIATE FORMS FOR REPLACEMENT OF SAID MONUMENTS SHALL BE COMPLETED AND FILED WITH DNR AT THE CONTRACTOR'S EXPENSE.
- 9) REPLACE ALL FENCES, PAVEMENT STRIPING, SIGNAGE, AND OTHER SURFACE FEATURES AFFECTED BY CONSTRUCTION IN KIND.
 - 10) CONTRACTOR SHALL COMPLY WITH CONDITIONS OF TEMPORARY CONSTRUCTION EASEMENTS TO BE SECURED BY THE CITY.
 - 11) PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION-RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT. ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY.
 - 12) CONTRACTOR SHALL COMPLY WITH THE PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS (DP) FOR THIS PROJECT, WHICH IS INCLUDED IN THE PROJECT SPECIFICATIONS.
 - 13) CAUTION! BASED ON PREVIOUS LAND USES ADJACENT TO THE SITE, HYDROCARBON BASED CONTAMINATION MAY EXIST IN THE GENERAL VICINITY OF THE INTERSECTION OF THIRD AVE. AND MAIN ST. NOTIFY THE CITY OF UNUSUAL CONDITIONS, INCLUDING OILY SOIL, FOUND ON THE WORK SITE.

CITY OF FERNDALE NOTES

GENERAL REQUIREMENTS:

1. ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE "STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" (WSDOT SPECS.), THE CITY OF FERNDALE DEVELOPMENT STANDARDS (COPDS) AND THE 2012 VERSION OF THE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (DOE MANUAL). IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
3. THE CONTRACTOR MUST HAVE A FULL SET OF CITY CONTRACT DOCUMENTS ON THE SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. CONSTRUCTION NOISE SHALL BE LIMITED TO BETWEEN 7 a.m. TO 8 p.m. MONDAY THROUGH SATURDAY, UNLESS PRE-APPROVED BY CITY.
5. THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION CENTER AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 811 OR 1-800-434-5555. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR COSTS INCURRED BECAUSE OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK FORCE, INCLUDING COSTS FOR REPAIRS, WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT BETWEEN THE APPROVED PLANS AND THE LOCATION OF ANY EXISTING UTILITIES.
6. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING IN CONFORMANCE WITH THE TEMPORARY EROSION & SEDIMENTATION CONTROL PLAN (TESC). THE TESC PLAN SHALL BE ON-SITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
8. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT.
9. THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDALE AND/OR WHATEVER COUNTY PRIOR TO COMMENCING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
10. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT AND THE PROJECT ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CITY WILL SCHEDULE THE MEETING.
11. ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT. REPRESENTATIVES FROM THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK IDENTIFIED ON THE PLANS, BOTH PUBLIC AND PRIVATE. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOWS:
 - A. PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
 - B. CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES.
 - C. PLACEMENT OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS OF WAY OR IN WATERLINE EASEMENT TO BE DEDICATED TO THE CITY OF FERNDALE.
 - D. PLACING OR BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS-OF-WAY, IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE, OR OTHER PUBLICLY SHARED FACILITIES.
 - E. GRADING OF PUBLIC OR PRIVATE ROADWAY AT:
 1. COMPLETION OF EXCAVATION TO SUBGRADE.
 2. COMPLETION OF BALLAST COURSE PLACEMENT
 3. COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT
 - F. POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
 - G. ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
 - H. OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
- I. END OF MAINTENANCE PERIOD
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT. ANY WORK WITHIN THE TRAVELED RIGHT OF WAY MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO PERFORMING THE WORK. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1-07.23-PUBLIC CONVENIENCE AND SAFETY, SHALL APPLY.
13. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS. PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS, THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT.
14. AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDALE UPON COMPLETION OF CONSTRUCTION AND PROVIDED IN CITY OF FERNDALE DATUM - VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83/91). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.

UNDERGROUND UTILITIES CONSTRUCTION

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO ASSURE ACCURATE AND TIMELY COLLECTION OF ALL REQUIRED AS-BUILT DATA. THIS DATA MUST ACCURATELY REFLECT THE LOCATIONS OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, WATER SERVICE TAPS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTIONS (BOTH AT PIPE AND AT PROPERTY LINE), VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL THE PROJECT ENGINEER AT LEAST 48-HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS-BUILT SURVEY.
2. THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
 - i. NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
 - ii. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
 - iii. TRENCH DEMATERING DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.
 - iv. WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
3. UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS.
4. ALL UTILITY TRENCHES IN THE RIGHT OF WAY SHALL BE BACKFILLED IN ACCORDANCE WITH THESE PLANS.
5. TESTING OF NEW WATER LINES, SEWER AND DRAIN SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.
6. ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO 95% DENSITY IN LIFTS NOT TO EXCEED 24 INCHES WITH A "HOE PACK," OR 8 INCHES WITH HAND-OPERATED COMPACTOR.
7. OPEN CUTTING OF EXISTING ROADWAYS IS ONLY ALLOWED AS APPROVED AND NOTED ON THESE APPROVED PLANS. ANY OPEN CUT SHALL BE RESTORED IN ACCORDANCE WITH THE FERNDALE STANDARD TRENCH DETAIL(S). ALL UTILITY TRENCHES UNDERNEATH AN EXISTING ROADWAY SHALL BE BACKFILLED WITH 150 PSI CONTROLLED DENSITY FILL.
8. NO PART OF THE DRAINAGE SYSTEM MAY BE COVERED, CONCEALED, OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE CITY INSPECTOR.

EARTHWORK

1. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UN-COMPACTED OR POORLY COMPACTED FILL SOILS WITHIN THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.
2. THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
3. UNSUITABLE MATERIAL FOUND AND NOT FIT FOR USE AS A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.
4. THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.

BASE COURSES & CRUSHED SURFACING

1. GRAVEL BASES AND BALLAST MATERIAL GRADATION SHALL MEET WSDOT STANDARD SPECIFICATIONS.
2. BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.
3. THE GRADED AND COMPACTED SURFACE OF THE CRUSHED SURFACING TOP COURSE SHALL BE WITHIN 1/8 INCH OF FINISHED GRADE.

STORM DRAINAGE

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF STORM DRAIN IMPROVEMENTS:
 - CATCH BASINS TYPE 2 COFSD ST-2 (CITY OF FERNDALE STD DETAIL)
 - "RESIDENTIAL SERVICE LINE" COFSD ST-15 (CITY OF FERNDALE STD DETAIL)
 - INLET & THRU-CURB INLET COFSD ST-7 & COFSD ST-8
2. STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP), ALL OTHER STORM SEWER PIPE SHALL BE SDR 35 PVC.
3. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
4. CONTROL DENSITY FILL SHALL BE USED IN AREAS WHERE LESS THAN 18" OF COVER IS MAINTAINED OVER THE PROPOSED STORM PIPES (PIPE IS IN ROAD BASE SECTION) AS SHOWN IN THE PLANS. DUCTILE IRON PIPE MAY BE USED FOR STORM PIPES WITH LESS THAN 18" OF COVER IF APPROVED BY THE CITY.
5. COVER OVER PIPES SHALL BE MAINTAINED DURING CONSTRUCTION. DEPTH OF COVER REQUIRED SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS AND WILL VARY WITH THE VEHICLE LOADS TRAVELING OVER THE PIPE. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR DAMAGE TO PIPE DURING CONSTRUCTION ACTIVITIES.
6. MEASURING AND END OF SITE CONSTRUCTION, THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM CATCH BASINS AND STORMWATER CONVEYANCES. DEBRIS SHALL NOT BE ALLOWED TO ENTER STREAMS OR OFF-SITE STORMWATER SYSTEMS.

WATER

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:
 - PIPE BEDDING COFSD W-11
 - TRENCH BACKFILL COFSD W-11
 - THRUST BLOCKING COFSD W-2, W-3 & W-4
 - WATER SERVICE (PER PROJECT)
2. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705 AND THE MOST RECENT VERSION OF WSDOT STANDARD SPECIFICATIONS.
3. ALL WATER MAIN PIPE SHALL BE DUCTILE IRON, MINIMUM THICKNESS CLASS 50, PER AWWA STANDARDS H3-71 AND C151-71, WITH CEMENT LINING PER AWWA STANDARD C104-71.
4. MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BENDS, REDUCERS AND SLEEVES SHALL BE DUCTILE IRON. JOINTS SHALL BE M.J., FLANGED OR PUSH-ON JOINTS AND SHALL CONFORM TO AWWA SPECIFICATIONS C-110-71 AND C-104-71.
5. CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDALE STANDARD DETAILS W-2, W-3 AND W-4, OR AS DIRECTED BY THE PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-09.3(21) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. NO PRE-CAST BLOCKS ARE ALLOWED.
6. CONNECTIONS TO EXISTING WATER MAINS - THE CONTRACTOR MUST NOTIFY THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE. ALL ACTIVITIES WHICH WILL INTERRUPT SERVICE SHALL OCCUR BETWEEN THE HOURS OF 11PM AND 6AM OR BE PRE-APPROVED BY CITY.
7. ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTION 7-09.3(23) AND SECTION 7-09.3(24) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION - CURRENT EDITION. HYDROSTATIC TEST PRESSURE FOR WATER MAIN ACCEPTANCE SHALL BE 250 PSI AND SHALL BE DONE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. SERVICES SHALL BE INCLUDED IN THE HYDROSTATIC TESTING AGAINST CLOSED CURB STOPS. THE CITY OF FERNDALE LABORATORY SHALL CONDUCT ALL DISINFECTANT TESTS AND BACTERIOLOGICAL TESTS. THE PIPE WILL NOT PASS TESTING UNLESS A ZERO BACTERIAL COUNT IS MEASURED ON TWO CONSECUTIVE TESTS, CONDUCTED 24 HOURS APART.
8. BACKFILL SHALL BE GRAVEL BASE, CLASS B, IN ALL STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% OPTIMUM DENSITY. IN UNIMPROVED AREAS, MINIMUM COMPACTATION SHALL BE 90% OF OPTIMUM DENSITY.
9. ALL PIPES SHALL HAVE A MINIMUM COVER OF 42".
10. ALL VALVES SHALL BE GATE VALVES AND SHALL BE INSTALLED WITH SLIP TYPE CAST IRON VALVE BOXES. GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH TO INCHES IN DIAMETER. SHORT-BODY VALVES SUITABLE FOR A NON-SHOCK SHUT-OFF PRESSURE OF 130 PSI AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO AWWA C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED. ALL VALVES SHALL HAVE NON-RISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.J. JOINTS. VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS.
11. WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE DETAIL A SHEET C5.1.
12. FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COFSD SD W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:
 - A. FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY VALVED 2-1/2" PORTS AND ONE 5-1/2" MAIN VALVE OPENING. A 4-1/2" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND AIRRAFT CABLE SHALL BE SUPPLIED. HYDRANTS SHALL BE EITHER IOWA OR M.H. 9297 HYDRANTS.
 - B. FIRE HYDRANTS SHALL HAVE THE STORZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE OF THE HYDRANT MUST NOT VARY MORE THAN 1 FOOT IN ELEVATION FROM THE GRADE LEVEL OF THE REQUIRED ACCESS. THE LOWEST STEM SHALL BE A MINIMUM OF 14" ABOVE THE GROUND.
 - C. IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE CRASH POSTS SHALL BE PROVIDED. NO OBSTRUCTIONS SHALL EXIST WITHIN A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE A MIN. OF 3' IN HEIGHT WITH A MIN. OF 2" OF PIPE BELOW GRADE. HYDRANT SHUTOFF VALVES SHALL BE LOCATED BETWEEN 5' AND 20' FROM THE HYDRANT.
 - D. UNDERGROUND SUPPLIES TO FIRE HYDRANTS MUST BE INSPECTED. SUCH INSPECTION SHALL INCLUDE VISUAL INSPECTION OF PIPING AND HYDROSTATIC PRESSURE TESTING TO A MIN. OF 250 PSI. A FLOW TEST WILL BE REQUIRED WHEN INSTALLATION IS COMPLETE.
 - E. FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY FUNCTIONAL BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

ROAD

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF THE STANDARD STREET SECTION:
 - TYPICAL STREET SECTION (PER PROJECT)
 - PCC CURB AND GUTTER (PER PROJECT)
 - PCC SIDEWALKS COFSD R-12 (SEE CONSTRUCTION DOCUMENTS TYPICAL SECTION)
 - PCC CURB RAMPS DETAIL A SHEET C5.4.
2. ROADWAY EXCAVATION WITHIN THE ROADWAY PRISM SHALL BE CUT TO A UNIFORM GRADE. THE COMPLETED SUBGRADE SURFACE SHALL NOT VARY MORE THAN 0.10-FOOT FROM THE LOWER EDGE OF A 15-FOOT STRAIGHTEDGE PLACED ON THE SUBGRADE PARALLEL TO THE CENTERLINE UNLESS APPROVED BY THE ENGINEER.
3. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER A REPORT FROM A QUALIFIED GEOTECHNICAL FIRM CERTIFYING THE COMPACTATION OF THE GRAVEL BASE UNDER ALL PAVING AREAS.
4. ASPHALT CONCRETE PAVEMENT, MATERIALS, AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SECTION 5-04, EXCEPT AS MODIFIED HEREIN. CONNECTION TO EXISTING PAVEMENT SHALL BE TO A STRAIGHT NEATLY-TRIMMED LINE.
5. CRUSHED ROCK SURFACING FOR PAVEMENT SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 9-03.9(3); BALLAST PER SECTION 9-03.9(1).
6. CEMENT CONCRETE SHALL BE CLASS 3000 (WITH AIR ENTRAINMENT) IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 6-02.3(2b).
7. CEMENT CONCRETE SIDEWALK SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH CITY STANDARDS, DRAWING NO. R-12.
8. CEMENT CONCRETE DRIVEWAYS SHALL BE 6 INCHES THICK AND CONSTRUCTED WHERE SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH THE CITY STANDARDS, DRAWING NO. R-15. A 2- INCH LAYER OF 3/4 INCH DRAIN ROCK SHALL BE USED FOR DRIVEWAY BEDDING.
9. CEMENT CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER, IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS, SECTION R-04 AND CITY OF FERNDALE STANDARDS, DRAWING R-8 AND R-9. HANDICAP RAMPS SHALL BE CONSTRUCTED PER WSDOT STANDARD PLANS T-40. WHERE NEW CEMENT CONCRETE CURB AND GUTTER IS CONNECT TO EXISTING CURB AND GUTTER, ASSURE THAT NO ABRUPT OFFSETS IN LINE OR GRADE SHALL BE CONSTRUCTED WHICH WILL BE UNSIGHTLY OR IMPEDE FLOW IN THE GUTTER LINE.
10. PAVEMENT:
 - A. SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
 - B. A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
 - C. ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT, WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVEMENT, THE APPLICANT SHALL PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. CONTRACTOR SHALL COLD PLACE PER DIMENSIONS SPECIFIED ON THE PLANS, AND INSTALL A MINIMUM 2-FOOT WIDE PETROTRAC PAVING FABRIC, OR EQUIVALENT, OVER JOINT BETWEEN PAVING LIFTS.
11. THRU-CURB BASINS AND THRU-CURB INLETS CONFORMING TO THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-05 SHALL BE CONSTRUCTED AT THE LOW POINT OF THE CURB FLOW LINES AND TO THE LOCATIONS, DIMENSIONS, AND DETAILS AS SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER AND CITY STANDARDS, DRAWING NO. R-8.
12. TRENCH EXCAVATIONS, BEDDING AND PIPE FOR STORMWATER PIPE LAYING SHALL BE IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-08.
13. STORM SEWER PIPE CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 7-04. MATERIAL SHALL BE HANCOCK SURE-LOK F477 PIPE OR CITY APPROVED EQUAL. STORM DRAIN SERVICE LINE SHALL BE 6" PVC PER WSDOT STANDARD SPECIFICATION, SECTION 9-05.1(5).
14. PERFORATED UNDERDRAIN PIPE SHALL MEET THE WSDOT STANDARD SPECIFICATION 7-01.3(2).

SANITARY SEWER SYSTEMS

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF FERNDALE STANDARD SPECIFICATIONS AND DETAILS, A.P.W.A. STANDARD SPECIFICATIONS, AND WSDOT STANDARD SPECIFICATIONS, MOST RECENT EDITIONS. SANITARY SEWER SYSTEM INSTALLATION, BOTH PUBLIC AND PRIVATE, IS SUBJECT TO CITY REVIEW AND APPROVAL.
2. ALL WORK MUST BE IN CONNECTION TO THE SATISFACTION OF THE CITY OF FERNDALE. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK. TESTING OF THE SEWER SYSTEM AND ALL CONNECTIONS TO EXISTING MAINS SHALL BE PERFORMED IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDALE REPRESENTATIVE.
3. SANITARY SEWER MAINS SHALL BE A MINIMUM 8 INCH DIAMETER PVC PIPE (SDR-35) CONFORMING TO THE PROVISIONS OF ASTM D 3034 AND INSTALLED TO CITY SPECIFICATIONS.
4. SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. ALL TRENCHES SHALL BE BACKFILLED WITH CLASS B BANK RUN GRAVEL WITHIN CITY RIGHT OF WAY AND TRAVELED WAYS OUTSIDE OF RIGHT OF WAY (ACCESS EASEMENTS) AND SHALL BE COMPACTED TO MINIMUM DENSITY OF 95% MODIFIED PROCTOR. USE OF SUITABLE NATIVE BACKFILL OUTSIDE OF TRAVELED WAY SHALL BE SUBJECT TO APPROVAL BY THE CITY.
5. ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDALE STANDARD DETAILS AND SHALL BE PRE-CHANNELLED. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.
6. ALL SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDALE STANDARD DETAIL SS-8.
7. CONTRACTOR SHALL EXTEND SEWER STUBS 5 FT BEYOND UTILITY CORRIDOR OR 15 FEET BEYOND RIGHT-OF-WAY LINE.
8. EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATERIGHTY PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2" DIA. PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" PAINTED GREEN AND STENCILED WITH THE WORD "SEWER" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.
9. ALL ACTIVITIES WHICH WILL INTERRUPT SERVICE SHALL OCCUR BETWEEN THE HOURS OF 11PM AND 6AM OR BE PRE-APPROVED BY CITY.



LEGEND & ABBREVIATIONS- SIZE & SCALE MAY VARY

EXISTING HATCH PATTERNS	DESCRIPTION
	EXIST. CONCRETE
	EXIST. BUILDING
	EXIST. EARTH
	EXIST. GRAVEL
	EXIST. SAND

PROPOSED HATCH PATTERNS	DESCRIPTION
	PROP. CONCRETE
	PROP. TOP COURSE GRAVEL
	PROP. GRAVEL
	PROP. SAND
	PROP. QUARRY SPALLS

SURFACE FEATURES EXISTING PLAN LINETYPES

EXISTING PLAN LINETYPES	DESCRIPTION
	BRIDGE
	BUILDING LINE
	BUILDING COLUMN
	BUILDING OVERHANG
	BULKHEAD
	CONCRETE EDGE
	CREEK EDGE
	CROWN OF ROAD
	CURB
	DITCH CENTERLINE
	DECK
	DOCK
	EDGE OF SAWCUT
	EDGE OF PAVEMENT
	FENCE
	GATE
	GRADE
	GRAVEL
	GUARDRAIL
	JERSEY BARRIER
	LAKE/POND WATER EDGE
	LIP OF CURB
	MISC SURFACE FEATURE
	MISC TRAFFIC
	PLANTER
	PATH
	RAILROAD
	RAMP (WOOD)
	RAILING
	RETAINING WALL
	ROAD STRIPING
	ROCKERY
	RIVERBANK/SHORELINE
	THALWEG LINE
	TOP OF BANK/SLOPE
	TOE OF BANK/SLOPE
	VEGETATION/SHRUB LINE
	WETLAND/SWAMP PERIMETER
	WETLAND BUFFER

SURFACE FEATURES PROPOSED PLAN LINETYPES

PROPOSED PLAN LINETYPES	DESCRIPTION
	BRIDGE
	BUILDING LINE
	CONCRETE
	CURB
	DITCH CENTERLINE
	EDGE OF BIKE LANE
	EDGE OF PAVEMENT
	FENCE
	GATE
	GRAVEL
	GUARDRAIL
	JERSEY BARRIER
	LIP OF CURB
	REBAR
	RETAINING WALL
	ROCKERY
	ROAD STRIPING

UTILITIES EXISTING PLAN LINETYPES

EXISTING PLAN LINETYPES	DESCRIPTION
	CABLE TELEVISION (AERIAL)
	CABLE TELEVISION (BURIED)
	SURVEILLANCE CAMERA (BURIED)
	FIBER OPTIC LINE (AERIAL)
	FIBER OPTIC LINE (BURIED)
	TELEPHONE (AERIAL)
	TELEPHONE (BURIED)
	TRAFFIC SIGNAL CONDUIT LINE
	POWER (AERIAL)
	POWER (BURIED)
	UTILITY (AERIAL)
	UTILITY (BURIED)
	POWER DUCT BANK (BURIED)
	DRAIN FIELD
	SANITARY SEWER
	8" SANITARY SEWER
	SANITARY SEWER (FORCE MAIN)
	STORM DRAINAGE
	CULVERT (Ø WIDTH)
	CULVERT
	RECLAIMED WATER
	IRRIGATION
	WATER
	8" WATER
	OVERFLOW
	STEAM
	GAS
	OIL
	AIR LINE
	BURIED UTILITY APPROX. EXTENTS
	MISC UTILITY (BURIED)

PROPOSED PLAN UTILITY LINETYPES

WATER	DESCRIPTION
	WATER (Ø WIDTH)
	8" WATER (Ø WIDTH)
	IRRIGATION (Ø WIDTH)
	RECLAIMED WATER (Ø WIDTH)
	POTABLE WATER (Ø WIDTH)
	WATER SERVICE
	WATER STRUCTURE

SANITARY SEWER	DESCRIPTION
	SEWER (Ø WIDTH)
	8" SEWER (Ø WIDTH)
	FORCE MAIN (Ø WIDTH)
	DRAIN FIELD
	SEWER SERVICE
	SEWER STRUCTURE

STORM DRAIN	DESCRIPTION
	STORM DRAIN (Ø WIDTH)
	CULVERT (Ø WIDTH)
	STORM SERVICE
	FOOTING DRAIN
	STORM STRUCTURE

GRADING

DESCRIPTION	
	GRADE BREAK
	SLOPE ARROWS

EROSION CONTROL

DESCRIPTION	
	EROSION TRIANGULAR SILT DIKE
	EROSION CONTROL COMPOST BERM
	EROSION CONTROL MINOR CONTOUR
	EROSION CONTROL MAJOR CONTOUR
	ORANGE BARRIER FENCE
	SILT FENCE
	STRAW WATTLE
	EROSION CONTROL FLOWLINE
	STRAW BALE
	INLET PROTECTION
	CHECK DAM

DEMOLITION

DESCRIPTION	
	UNDERGROUND UTILITY TO BE REMOVED

SURVEY PLAN LINETYPES

DESCRIPTION	
	CENTERLINE (EXISTING)
	CENTERLINE (CONSTRUCTION)
	CENTERLINE (PROPOSED)
	CONTOUR (EXISTING MINOR)
	CONTOUR (EXISTING INDEX)
	HYDRO CONTOUR (EXISTING INDEX)
	CONTOUR (PROPOSED INDEX)
	CONTOUR (PROPOSED MINOR)
	CATCHLINE
	CUT LINE
	DONATION LAND CLAIM (EXIST.)
	EASEMENT (PROPOSED)
	EASEMENT (EXISTING)
	FILL LINE
	MEANDER LINE
	ORDINARY HIGH WATER LINE
	MEAN LOW LEVEL WATER LINE
	OWNERSHIP LINE
	PROPERTY LINE (RECORD OR ADJACENT)
	PROPERTY LINE
	QUARTER SECTION LINE
	RANGE/TOWNSHIP LINE
	RESERVATION/PARK/FOREST (EX)
	CLEARING LIMITS
	RIGHT-OF-WAY (EXISTING)
	RIGHT-OF-WAY (EXISTING)
	RIGHT-OF-WAY (EXISTING USED)
	RIGHT-OF-WAY (PROPOSED)
	RIGHT-OF-WAY (EX. RECORD)
	RIGHT-OF-WAY (RECORD OR ADJACENT)
	RIGHT-OF-WAY (LIMITED ACCESS)
	RIGHT-OF-WAY (LIMITED ACCESS)
	SECTION LINE
	SETBACK LINE (EXISTING)
	SIXTEENTH SECTION LINE
	STATE/COUNTY/CORPORATE LIMIT
	VACATED RIGHT-OF-WAY
	EASEMENT (RECORD)
	RIGHT-OF-WAY CENTER (RECORD)
	DONATION LAND CLAIM (RECORD)
	MEANDER LINE (RECORD)
	PARK LINE (RECORD)
	SECTION LINE (RECORD)
	QUARTER SECTION LINE (RECORD)
	SIXTEENTH SECTION LINE (RECORD)
	STATE LINE (RECORD)
	RANGE LINE (RECORD)

PROFILE LINETYPES

DESCRIPTION	
	PROFILE EX. GRND
	PROFILE FINISH GRND
	PROFILE GRID
	PROFILE VERTICAL GRID
	PROFILE EX. GROUND LEFT
	PROFILE EXISTING GROUND RIGHT
	FIBER OPTIC PROFILE (EXISTING)
	GAS PROFILE (EXISTING)
	POWER PROFILE (EXISTING)
	RAILROAD PROFILE (EXISTING)
	SANITARY PROFILE (EXISTING)
	SANITARY PROFILE (PROPOSED)
	STORM PROFILE (EXISTING)
	TELEPHONE PROFILE (EXISTING)
	STORM PROFILE (PROPOSED)
	TV PROFILE (EXISTING)
	UTILITY PROFILE (EXISTING)
	WATER PROFILE (EXISTING)
	WATER PROFILE (PROPOSED)

MISC. SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		SOIL BORING
		MONITORING WELL
		TEST WELL
		TEST PIT
		EMBANKMENT
		MAIL BOX
		SIGN
		RIP RAP
		BOULDER
		SHRUB
		TREE (Conifer)*
		TREE (Deciduous)*
		STUMP-PLAN VIEW
		YARD LIGHT
		WELL
		PILE
		ROCKERY
		WHEEL STOP
		SPLASH BLOCK
		GAS METER
		GAS VALVE
		PAD MOUNTED TRANSFORMER
		POWER VAULT
		TRANSMISSION TOWER
		POWER METER
		GUY POLE
		UTILITY POLE
		UTILITY POLE ANCHOR
		TELE RISER
		CABLE RISER
		TELEPHONE VAULT
		STEAM MANHOLE
		PARKING METER
		POST

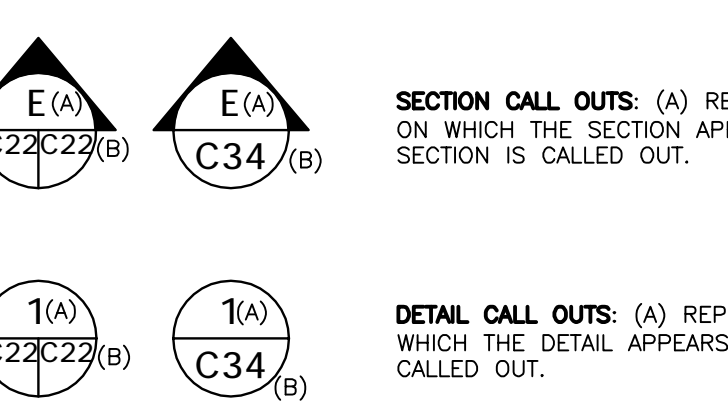
SANITARY SEWER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		SAN. SEWER CLEAN OUT
		SAN. SEWER MANHOLE

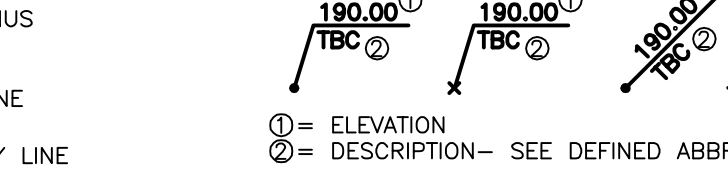
STORM DRAIN SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		STORM DRAIN CB TYPE 1
		STORM DRAIN CB TYPE 2
		STORM DRAIN CB TYPE 2 W/CB LID
		STORM DRAIN WITH OVERFLOW GRATE
		STORM DRAIN CLEAN-OUT

SECTION/DETAIL CALL-OUTS



SPOT ELEVATIONS



SYMBOLS

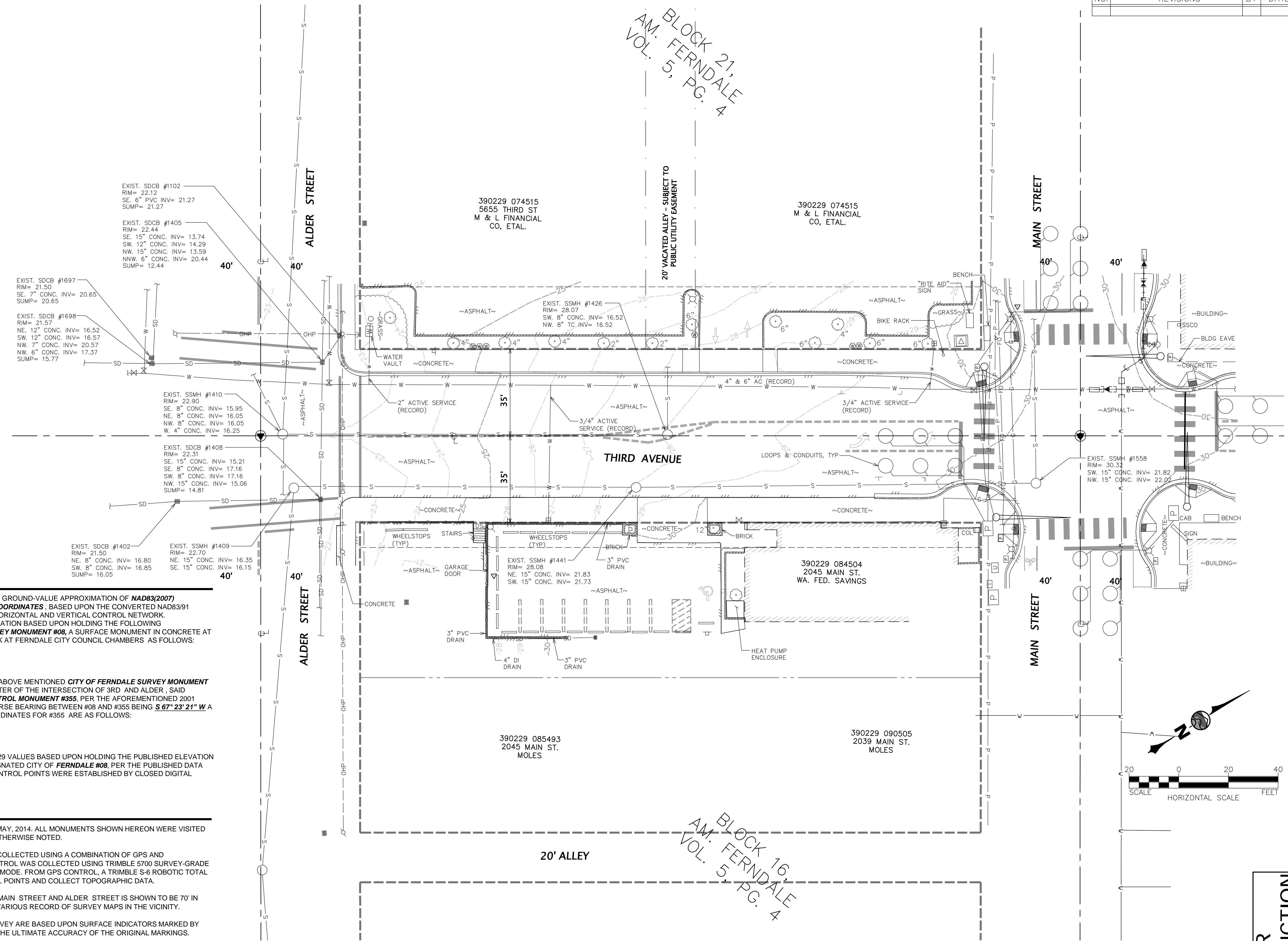
°	=DEGREES
±	=PLUS/MINUS
∅	=DIAMETER
Δ	=DELTA
CL	=CENTERLINE
FL	=FLOWLINE
PL	=PROPERTY LINE

WATER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		GLOBE VALVE, FL
		BALL CHECK VALVE, FL
		BLOW-OFF VALVE
		SWING CHECK VALVE, FL
		BUTTERFLY VALVE, FL
		HOSE BIB/SPIGOT
		DOUBLE LEAF CHECK VALVE
		PLUG VALVE
		BALL VALVE
		FLOAT VALVE
		PINCH VALVE
		PRESSURE & VACUUM RELIEF VALVE
		VACUUM RELIEF VALVE
		PRESSURE RELIEF VALVE
		PRESSURE REGULATING VALVE (SELF CONTAINED)
		BACK PRESSURE REGULATING VALVE (SELF CONTAINED)
		IN-LINE SPRING LOADED RELIEF VALVE
		CAP/PLUG
		GUARD POST
		THRUST BLOCK
		WATER METER
		FIRE DEPARTMENT CONNECTION
		WATER VALVE
		FIRE HYDRANT
		WATER MANHOLE
		POST INDICATOR VALVE
		11-1/4 BEND, MJ-FL

NO.	REVISIONS	BY	DATE

BLOCK 21,
AM. FERNDAL
VOL. 5, PG. 4



CONTROL NOTES

- 1. BASIS OF COORDINATES:** COORDINATES ARE A GROUND-VALUE APPROXIMATION OF **NAD83(2007) WASHINGTON STATE PLANE (NORTH ZONE) COORDINATES**, BASED UPON THE CONVERTED NAD83/91 VALUES FOR THE CITY OF FERNDAL'S 2001 HORIZONTAL AND VERTICAL CONTROL NETWORK. COORDINATION FOR GROUND-VALUE MENSURATION BASED UPON HOLDING THE FOLLOWING COORDINATES FOR **CITY OF FERNDAL SURVEY MONUMENT #08**, A SURFACE MONUMENT IN CONCRETE AT THE SOUTH AND EAST SIDE OF THE SIDEWALK AT FERNDAL CITY COUNCIL CHAMBERS AS FOLLOWS:

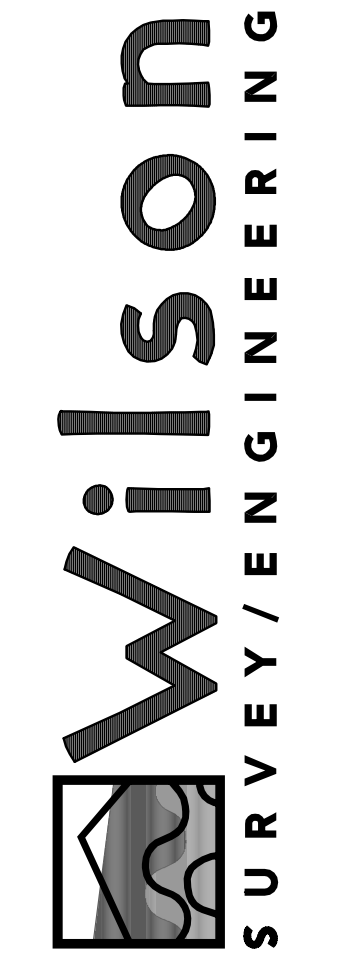
NORTHING = 678,623.461 USFT
EASTING = 1,217,289.103 USFT
- 2. BASIS OF BEARINGS:** HELD BEARING BETWEEN ABOVE MENTIONED **CITY OF FERNDAL SURVEY MONUMENT #08** (BOC) AND FOUND GIN SPIKE IN THE CENTER OF THE INTERSECTION OF 3RD AND ALDER, SAID MONUMENT BEING A **CITY OF FERNDAL CONTROL MONUMENT #355**, PER THE AFOREMENTIONED 2001 CONTROL NETWORK. THE GPS-DERIVED INVERSE BEARING BETWEEN #08 AND #355 BEING **S 67° 23' 21" W** A DISTANCE OF **642.05 FEET**. NAD83(2007) COORDINATES FOR #355 ARE AS FOLLOWS:

NORTHING = 678,376.611 USFT
EASTING = 1,216,696.399 USFT
- 3. BASIS OF ELEVATIONS:** ELEVATIONS ARE NGVD29 VALUES BASED UPON HOLDING THE PUBLISHED ELEVATION OF **29.16'** AT THE SURFACE MONUMENT DESIGNATED CITY OF **FERNDAL #08**, PER THE PUBLISHED DATA SHEET. ELEVATIONS AT THE WILSON SITE CONTROL POINTS WERE ESTABLISHED BY CLOSED DIGITAL LEVEL LOOP.

SURVEY NOTES

1. THIS BOUNDARY SURVEY WAS PERFORMED IN MAY, 2014. ALL MONUMENTS SHOWN HEREON WERE VISITED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
2. ANGULAR AND LINEAR MEASUREMENTS WERE COLLECTED USING A COMBINATION OF GPS AND CONVENTIONAL METHODOLOGIES. PRIMARY CONTROL WAS COLLECTED USING TRIMBLE 5700 SURVEY-GRADE GPS RECEIVERS OPERATING IN NETWORKED RTK MODE. FROM GPS CONTROL, A TRIMBLE S-6 ROBOTIC TOTAL STATION WAS USED TO TIE SECONDARY CONTROL POINTS AND COLLECT TOPOGRAPHIC DATA.
3. THE RIGHT-OF-WAY OF 3RD AVENUE BETWEEN MAIN STREET AND ALDER STREET IS SHOWN TO BE 70' IN WIDTH, CENTERED ON FOUND MONUMENTS PER VARIOUS RECORD OF SURVEY MAPS IN THE VICINITY.
4. UNDERGROUND UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON SURFACE INDICATORS MARKED BY OTHERS AND WILSON IS NOT RESPONSIBLE FOR THE ULTIMATE ACCURACY OF THE ORIGINAL MARKINGS.
5. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH BY WAC 332-130-090.
6. THIS SURVEY WAS PERFORMED WITHOUT BENEFIT OF A TITLE REPORT.
7. **CAUTION!** EXISTING CONDITIONS SHOWN ARE A COMPILATION OF FIELD SURVEY COMPLETED IN FEBRUARY, 2014 AND OTHER DATA PROVIDED BY OTHER SOURCES. LOCATION & DEPTH OF UTILITIES MUST BE VERIFIED BY CONTRACTOR.

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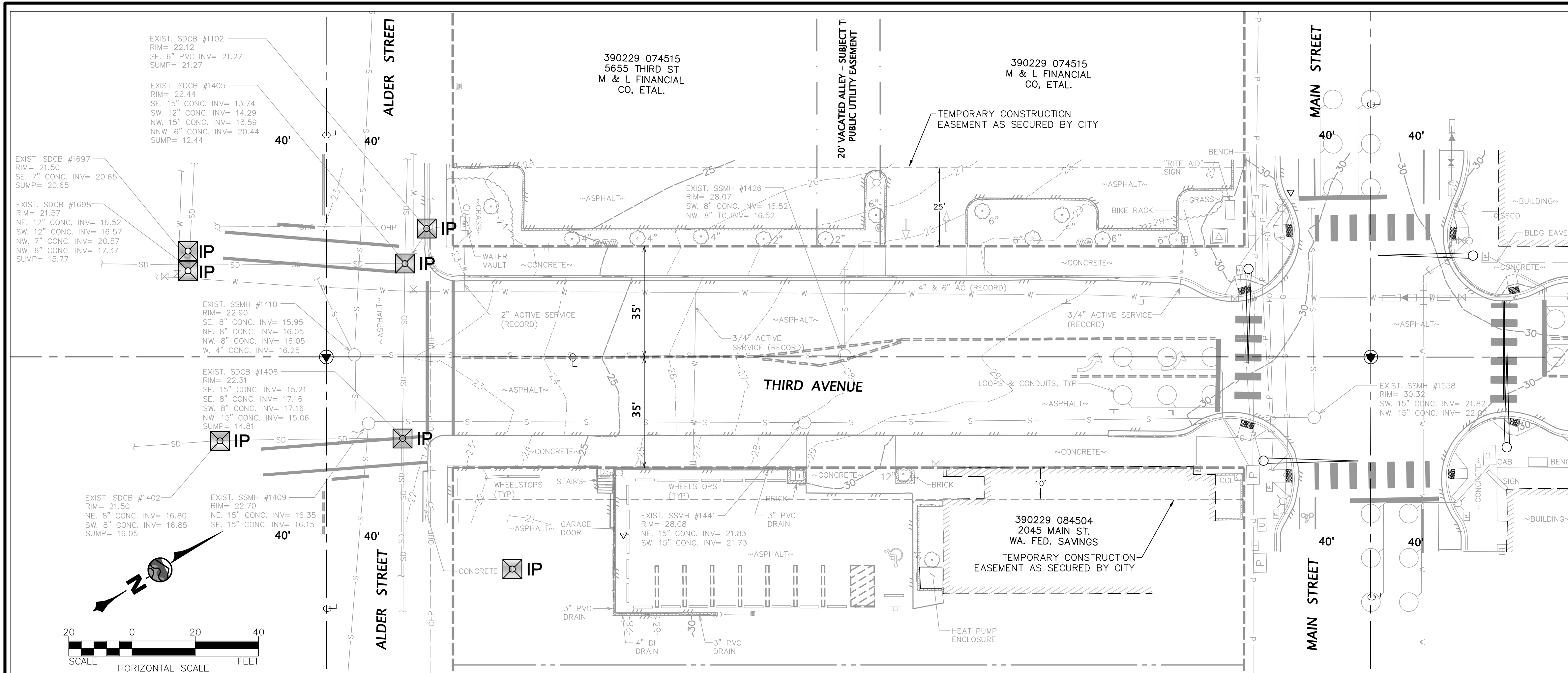
CITY OF FERNDAL, WA
WASHINGTON
FERNDAL
THIRD AVENUE STORMWATER IMPROVEMENTS
EXISTING CONDITIONS

FOR CONSTRUCTION SHEET

DATE	4-10-2017
SCALE	AS SHOWN
JOB NUMBER	2014-014
SHEET	C1.1
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BLOCK 16,
AM. FERNDAL
VOL. 5, PG. 4



NO.	REVISIONS	BY	DATE

BMP C233 - SILT (FILTER FABRIC) FENCE

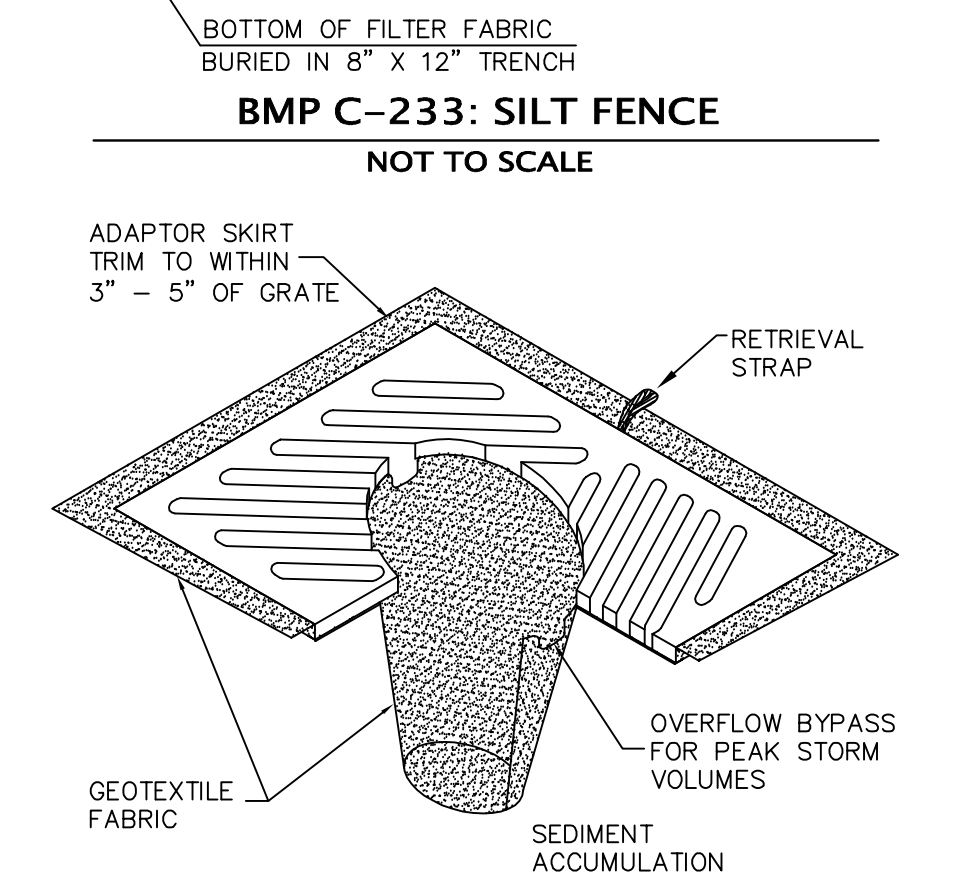
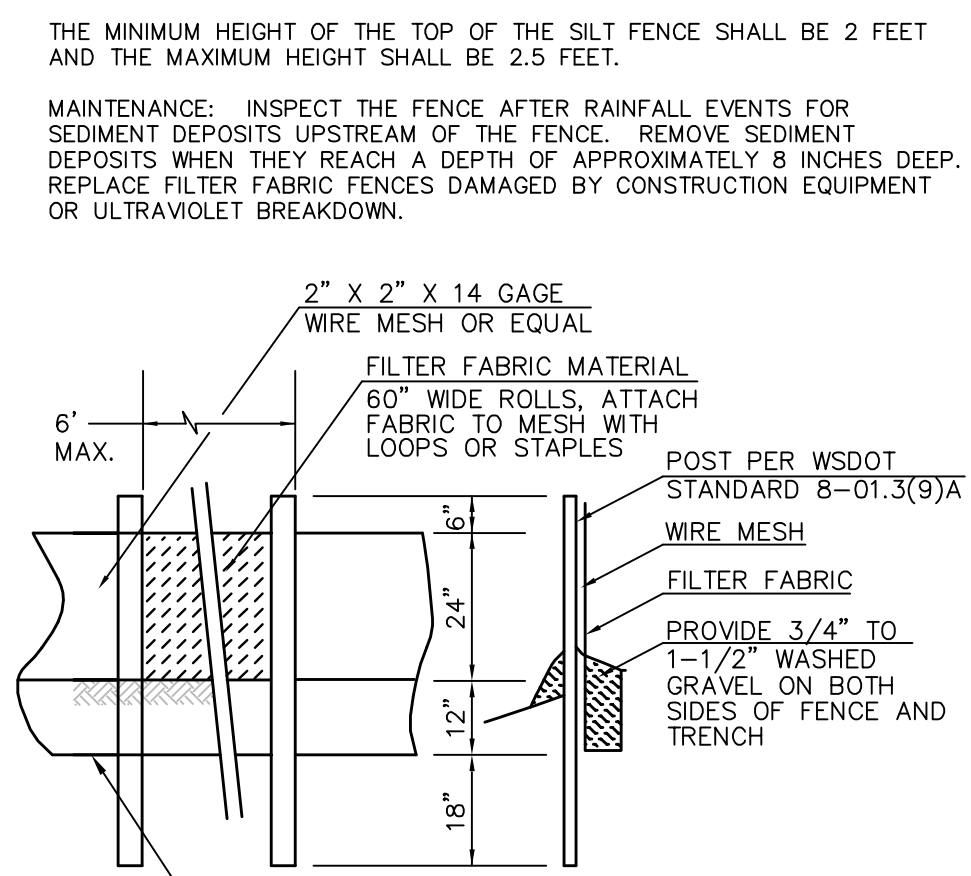
PURPOSE: USE OF A SILT FENCE REDUCES THE TRANSPORT OF COARSE SEDIMENT FROM A CONSTRUCTION SITE BY PROVIDING A TEMPORARY PHYSICAL BARRIER TO SEDIMENT AND REDUCING THE RUNOFF VELOCITIES OF OVERLAND FLOW.

INSTALLATION: USE DOWN SLOPE OF DISTURBED AREAS AS SHOWN ON THE PLAN AND AS NEEDED TO RESPOND TO SITE SPECIFIC CONDITIONS. GEOTEXTILE SHALL MEET THE FOLLOWING STANDARDS: POLYMETRIC MESH AOS (ASTM D4751) = 0.60 MM MAXIMUM FOR SILT FILM WOVENS, 0.30 MM MAXIMUM FOR ALL OTHER GEOTEXTILES TYPES, AND 0.15 MM FOR ALL FABRIC TYPES, WATER PERMITTIVITY (ASTM D4491) = 0.2 SEC(-1) MINIMUM, GRAB TENSILE STRENGTH (ASTM D4632) = 180 POUNDS MINIMUM FOR EXTRA STRENGTH FABRIC, 100 POUNDS MINIMUM FOR STANDARD STRENGTH FABRIC, GRAB TENSILE ELONGATION (ASTM D4632) = 30% MAXIMUM, ULTRAVIOLET RESISTANCE (ASTM D4355) = 70% MINIMUM.

STANDARD STRENGTH FABRICS SHALL BE SUPPORTED WITH WIRE MESH, CHICKEN WIRE, 2-INCH X 2-INCH WIRE, SAFETY FENCE, OR JUTE MESH TO INCREASE THE STRENGTH OF THE FABRIC. SILT FENCE MATERIALS ARE AVAILABLE THAT HAVE SYNTHETIC MESH BACKING ATTACHED.

THE MINIMUM HEIGHT OF THE TOP OF THE SILT FENCE SHALL BE 2 FEET AND THE MAXIMUM HEIGHT SHALL BE 2.5 FEET.

MAINTENANCE: INSPECT THE FENCE AFTER RAINFALL EVENTS FOR SEDIMENT DEPOSITS UPSTREAM OF THE FENCE. REMOVE SEDIMENT DEPOSITS WHEN THEY REACH A DEPTH OF APPROXIMATELY 8 INCHES DEEP. REPLACE FILTER FABRIC FENCES DAMAGED BY CONSTRUCTION EQUIPMENT OR ULTRAVIOLET BREAKDOWN.



- NOTES:**
1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
 2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
 3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

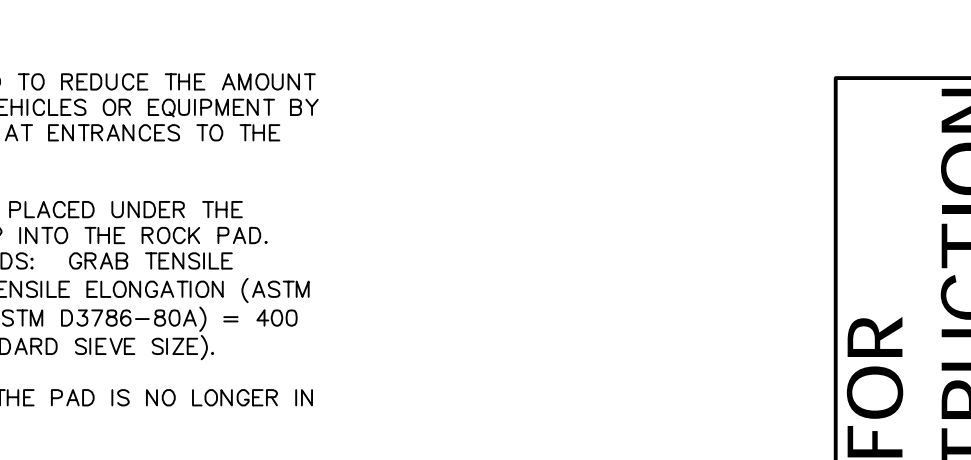
BMP C-220: STORM DRAIN INLET PROTECTION
NOT TO SCALE

BMP C105 - STABILIZED CONSTRUCTION ENTRANCE

PURPOSE: CONSTRUCTION ENTRANCES ARE STABILIZED TO REDUCE THE AMOUNT OF SEDIMENT TRANSPORTED ONTO PAVED ROADS BY VEHICLES OR EQUIPMENT BY CONSTRUCTING A STABILIZED PAD OF QUARRY SPALLS AT ENTRANCES TO THE CONSTRUCTION SITES.

INSTALLATION: A SEPARATIONS GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENT FROM PUMPING UP INTO THE ROCK PAD. THE GEOTEXTILE SHALL MEET THE FOLLOWING STANDARDS: GRAB TENSILE STRENGTH (ASTM D4751) = 200 PSI MINIMUM, GRAB TENSILE ELONGATION (ASTM D4632) = 30% MAXIMUM, MULLEN BURST STRENGTH (ASTM D3786-80A) = 400 PSI MINIMUM, AOS (ASTM D4751) = 20-45 (U.S. STANDARD SIEVE SIZE).

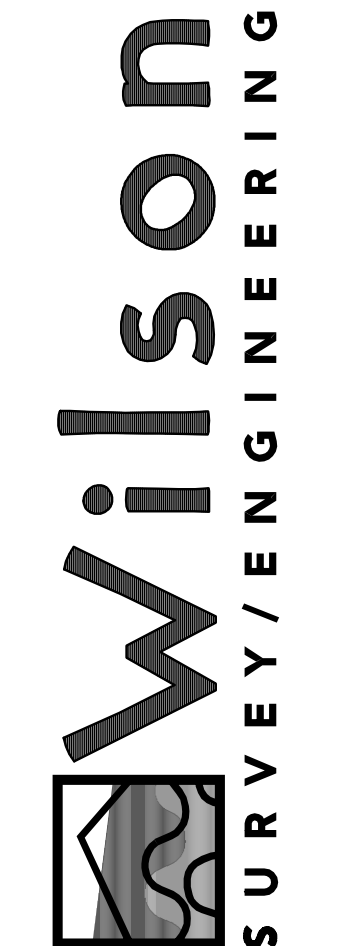
MAINTENANCE: QUARRY SPALLS SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH SPECIFICATIONS.



BMP C-105: STABILIZED CONSTRUCTION ENTRANCE/EXIT
NOT TO SCALE



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DRAWN BY: JGS
CHECKED BY:

CITY OF FERNDALE, WA
WASHINGTON
FERNDALE
THIRD AVENUE STORMWATER IMPROVEMENTS
T.E.S.C. PLAN

FOR CONSTRUCTION SHEET
DATE: 4-10-2017
SCALE: AS SHOWN
JOB NUMBER: 2014-014
OF 17

- GENERAL NOTES**
1. BMPs: BEST MANAGEMENT PRACTICES (BMPs) REFERRED TO ON THIS PLAN AND IN THESE NOTES SHALL BE CONSTRUCTED AND MAINTAINED AS DESCRIBED IN DEPARTMENT OF ECOLOGY'S 2005 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOL. II, "CONSTRUCTION STORMWATER POLLUTION PREVENTION".
 2. EXTENT: THE EXTENT OF EROSION AND SEDIMENTATION CONTROL MEASURES IS DEPENDENT ON WEATHER CONDITIONS, SITE SLOPES, LENGTH OF TIME GROUND IS LEFT EXPOSED, AND THE AREA OF EXPOSED GROUND. THE CONTRACTOR SHALL AT ALL TIMES MINIMIZE THE RISK OF SITE EROSION BY CAREFUL SCHEDULING AND BY IMPLEMENTING AND MAINTAINING BMPs UNTIL THE SITE IS PERMANENTLY STABILIZED.
 3. UNWORKED SOILS: ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY SUITABLE AND TIMELY APPLICATION OF BMPs.
 4. VEGETATION: EXISTING VEGETATION SHALL BE PRESERVED WHERE ATTAINABLE.
 5. SLOPES: CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES SHALL BE STABILIZED AS SOON AS POSSIBLE.
 6. OUTLETS: STABILIZATION ADEQUATE TO PREVENT EROSION OF OUTLETS AND ADJACENT STREAM BANKS SHALL BE PROVIDED AT THE OUTLETS OF ALL CONVEYANCE SYSTEMS.
 7. INLETS: ALL EXISTING AND PROPOSED STORM DRAIN INLETS SHALL BE PROPERLY MAINTAINED AND PROTECTED FROM SILTATION.
 8. ENTRANCES: PROVISION SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SOIL ONTO THE PAVED ROAD. IF SOIL IS TRANSPORTED ONTO A ROAD SURFACE, THE ROADS ADJACENT TO THE CONSTRUCTION SITE SHALL BE CLEANED ON A WEEKLY BASIS. STREET WASHING SHALL BE ALLOWED ONLY IF WASHWATER IS INFILTRATED IN THE RIGHT OF WAY.
 9. SITE RUNOFF: PRIOR TO FLOWING OFF THE SITE, STORMWATER RUNOFF SHALL PASS THROUGH A SILT FENCE OR EQUAL BMP.
 10. ADJACENT PROPERTIES: PROPERTIES ADJACENT TO THE PROJECT SHALL BE PROTECTED FROM SEDIMENT DEPOSITION.
 11. DOWNSTREAM WATERWAYS & PROPERTY: PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE CONSTRUCTION SITE SHALL BE PROTECTED FROM EROSION DUE TO ANY TEMPORARY CHANGES IN VOLUME, VELOCITY, AND PEAK FLOW OF STORMWATER RUNOFF FROM THE PROJECT SITE.
 12. REMOVAL OF BMPs: ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON-SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.
 13. INSPECTIONS: ALL BMPs SHALL BE INSPECTED, MAINTAINED, AND REPAIRED BY THE CONTRACTOR AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL ON-SITE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED REGULARLY AS NEEDED AND DURING WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.5-INCHES OF RAIN PER 24-HOUR PERIOD.
 14. REPORTS: THE CONTRACTOR SHALL PREPARE AND MAINTAIN REPORTS SUMMARIZING THE SCOPE OF INSPECTIONS, THE PERSONNEL CONDUCTING THE INSPECTION, THE DATES OF THE INSPECTION, MAJOR OBSERVATIONS ACTIONS TAKEN AS A RESULT OF THESE INSPECTIONS.
 15. OTHER REQUIREMENTS: THE ENGINEER, OWNER, CITY OF FERNDALE, DEPARTMENT OF ECOLOGY, OR OTHER AGENCIES MAY REQUIRE BMPs IN ADDITION TO WHAT IS SHOWN ON THIS PLAN IF NECESSARY TO PREVENT VIOLATIONS OF SURFACE WATER QUALITY. THE CONTRACTOR SHALL IMPLEMENT THE BMPs AS REQUIRED.
 16. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.

NARRATIVE

EROSION AND SEDIMENT CONTROL BMPs: ANTICIPATED BMPs THAT WILL BE UTILIZED INCLUDE: MINIMIZING VEGETATION REMOVAL, TEMPORARY COVER MEASURES, PERMANENT SEEDING & PLANTING, SURFACE ROUGHENING, STORM DRAIN INLET PROTECTION AND FILTER FENCING. OTHER BMPs MAY BE UTILIZED TO MINIMIZE EROSION AND SEDIMENT TRANSPORT AS CONSTRUCTION SCHEDULES AND WEATHER CONDITIONS DICTATE.

TEMPORARY STABILIZATION: ALL DISTURBED AREAS SHALL BE STABILIZED IF IN THE EVENT OF RAIN. ALL DISTURBED AREAS SHALL BE STABILIZED IF UNWORKED FOR SEVEN DAYS.

PERMANENT STABILIZATION: ALL DISTURBED AREAS OUTSIDE OF ROADWAY SHOULDERS AND PARKING AREAS WILL BE PERMANENTLY LANDSCAPED OR SEEDED AND RESTORED TO THEIR EXISTING CONDITIONS.

CONVEYANCE BYPASS: PROVISION FOR BYPASS OF STORMWATER CONVEYANCE SHALL BE PROVIDED. BYPASS SHALL BE INSTALLED FOR THE DURATION OF THE WORK. MATERIALS FOR BYPASS NEED NOT BE INSTALLED WHILE WORK IS IN PROGRESS AT A PARTICULAR LOCATION, BUT MATERIALS AND EQUIPMENT FOR IMMEDIATE INSTALLATION SHALL BE ON HAND. BYPASS SHALL BE IN PLACE WHILE SITE IS UNATTENDED FOR GREATER THAN 12 HOURS. A TRENCH MAY BE DUG FOR THE BYPASS PRIOR TO INSTALLATION OF BYPASS IF NECESSARY AND FEASIBLE. ANY PIPING USED FOR BYPASS SHALL BE OF A DIAMETER AT LEAST 2/3 OF THE EXISTING PIPE/CULVERT DIAMETER.

MAINTENANCE: THE BMPs SHALL BE INSPECTED AS NEEDED (MINIMUM OF ONCE EVERY THREE DAYS) AND DURING/AFTER RAINFALL EVENTS. THE BMPs WILL BE MAINTAINED UNTIL THE RISK OF EROSION HAS PASSED AND THE AREA IS PERMANENTLY STABILIZED.

PROJECT WIDE BMPs

THE FOLLOWING BMPs SHALL BE IMPLEMENTED THROUGHOUT THE ENTIRE PROJECT TO THE MAXIMUM EXTENT POSSIBLE:

BMP C101 PRESERVING NATURAL VEGETATION. CONTRACTOR SHALL CLEAR AND DISTURB ONLY AREAS REQUIRED TO CONSTRUCT IMPROVEMENTS AND SHALL DILIGENTLY MINIMIZE DISTURBED AREA.

BMP C102 BUFFER ZONES. CONTRACTOR SHALL MARK CLEARING LIMITS AND KEEP ALL EQUIPMENT AND CONSTRUCTION DEBRIS OUT OF NATURAL AREAS.

BMP C120 TEMPORARY & PERMANENT SEEDING. CONTRACTOR SHALL COMPLETE REQUIRED LANDSCAPING AS RAPIDLY AS POSSIBLE. ALL OTHER DISTURBED AREAS OUTSIDE OF PAVED AREAS SHALL BE HYDROSEEDING AS RAPIDLY AS POSSIBLE WITH SUITABLE SEED-MULCH-FERTILIZER MIX FOR LOCAL CLIMATE.

BMP C121 MULCHING. CONTRACTOR SHALL MULCH ALL LANDSCAPED AREAS AS RAPIDLY AS POSSIBLE.

BMP C130 SURFACE ROUGHENING. CONTRACTOR SHALL ROUGHEN DISTURBED AREAS PRIOR TO PERMANENT SEEDING AND PLANTING.

BMP C140 DUST CONTROL. CONTRACTOR SHALL KEEP DUST FROM CONSTRUCTION ACTIVITIES AND EXPOSED SOILS TO A MINIMUM.

BMP C160 CERTIFIED EROSION CONTROL LEAD (MUST BE EMPLOYED BY CONTRACTOR AND ON SITE DURING CONSTRUCTION.)

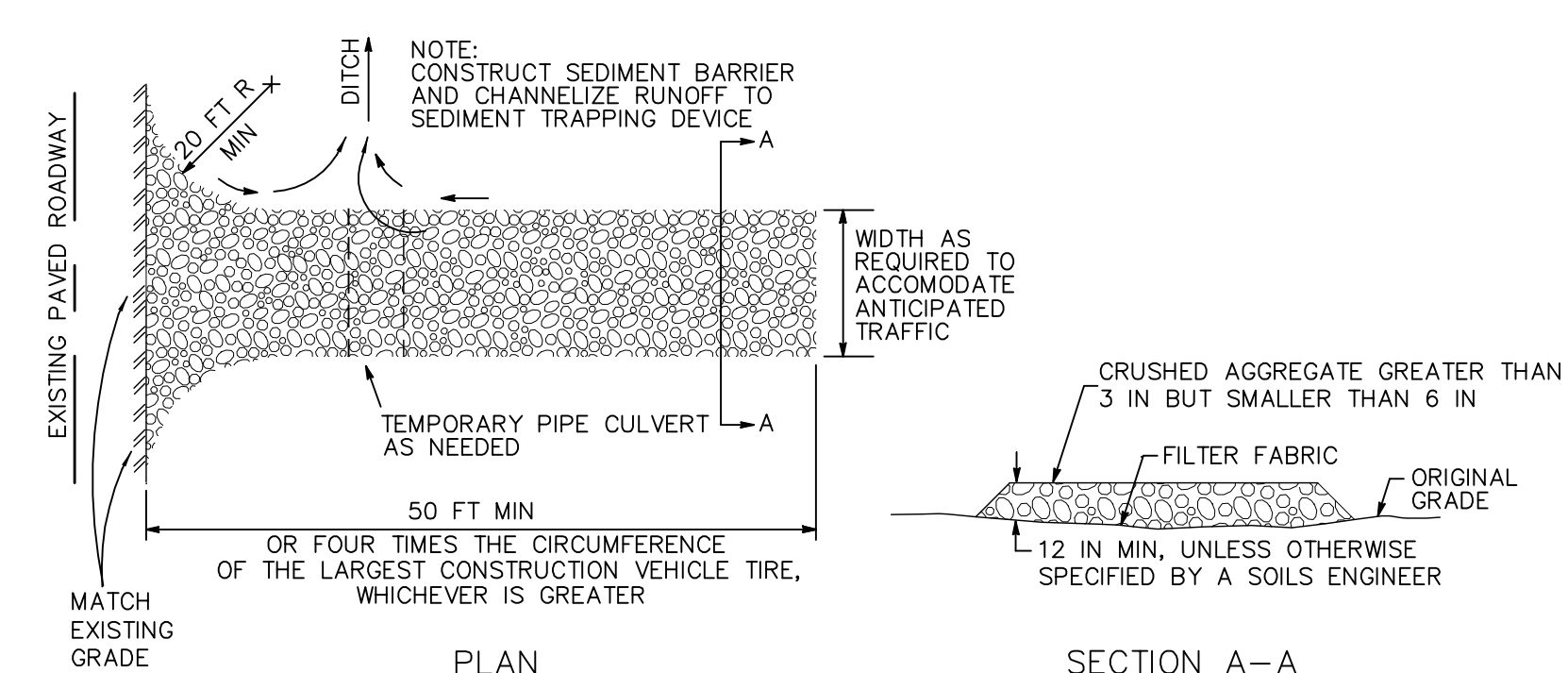
AREA SPECIFIC BMPs

THE FOLLOWING BMPs SHALL BE USED IN LOCATIONS IDENTIFIED ON THE SITE PLAN, OR SPECIFICALLY DESCRIBED:

BMP C233 SILT FENCE. CONTRACTOR SHALL INSTALL SILT FENCE ALONG PROJECT LIMITS WHICH ARE DOWN-GRADE OF DISTURBED/UNDISTURBED GROUND.

BMP C220 STORM DRAIN INLET PROTECTION. CONTRACTOR SHALL INSTALL CATCH BASIN INSERTS IN STORM DRAIN STRUCTURES NOTED ON PLANS. CATCH BASIN INSERTS SHALL BE PROVIDED IN PROPOSED CATCH BASINS UPON INSTALLATION.

BMP C105 STABILIZED CONSTRUCTION ENTRANCE/EXIT. CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCE AT EACH EGRESS LOCATION.



BMP C-105: STABILIZED CONSTRUCTION ENTRANCE/EXIT
NOT TO SCALE

NOTE: CONSTRUCT SEDIMENT BARRIER AND CHANNELIZE RUNOFF TO SEDIMENT TRAPPING DEVICE.

CRUSHED AGGREGATE GREATER THAN 3 IN BUT SMALLER THAN 6 IN

12 IN MIN, UNLESS OTHERWISE SPECIFIED BY A SOILS ENGINEER

OR FOUR TIMES THE CIRCUMFERENCE OF THE LARGEST CONSTRUCTION VEHICLE TIRE, WHICHEVER IS GREATER

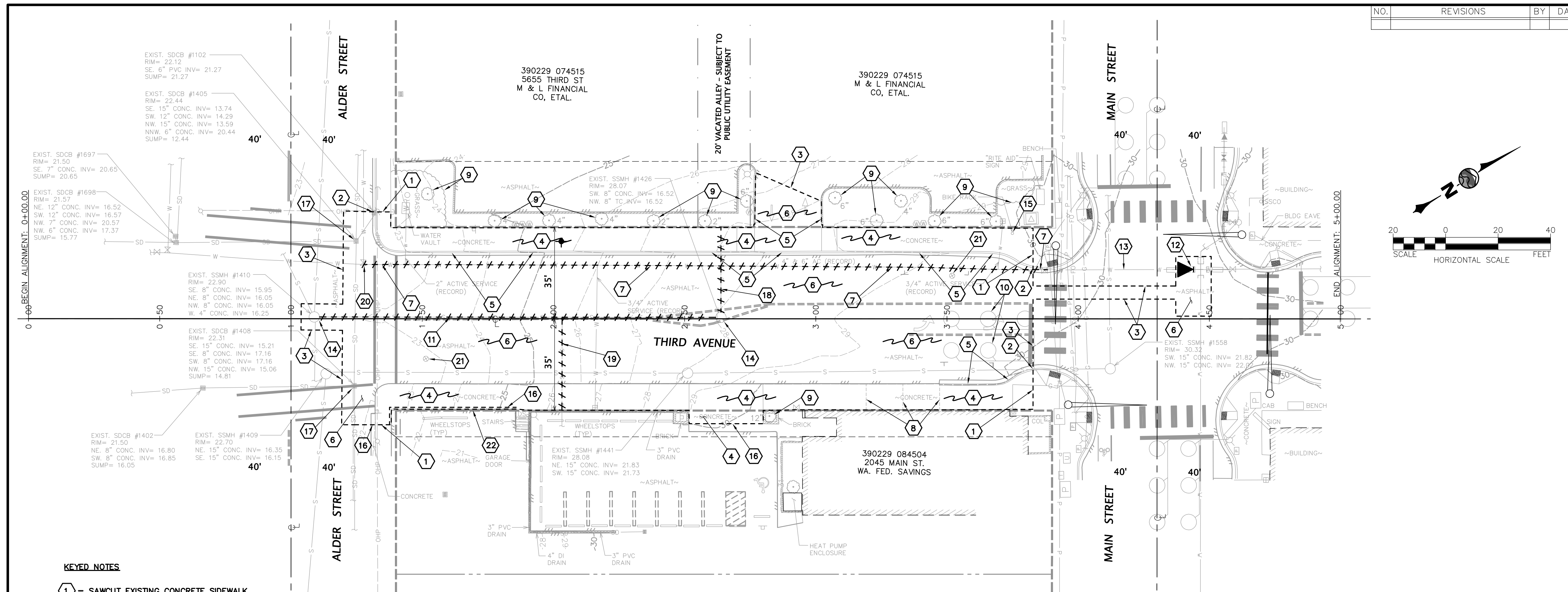
50 FT MIN

TEMPORARY PIPE CULVERT AS NEEDED

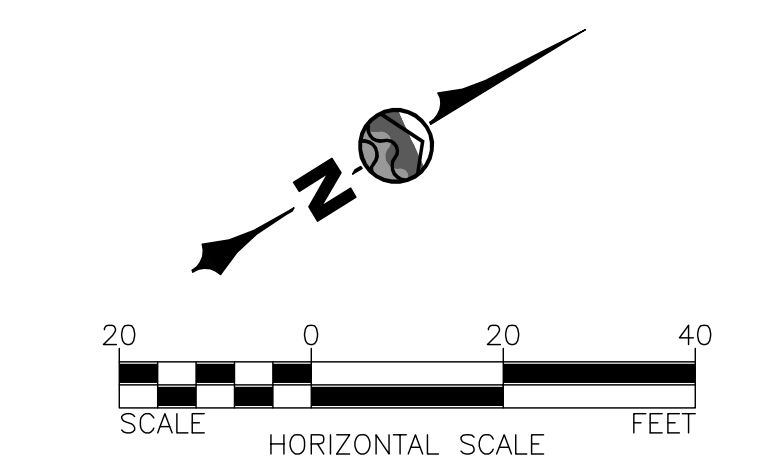
WIDTH AS REQUIRED TO ACCOMMODATE ANTICIPATED TRAFFIC

EXISTING GRADE

MATCH EXISTING GRADE



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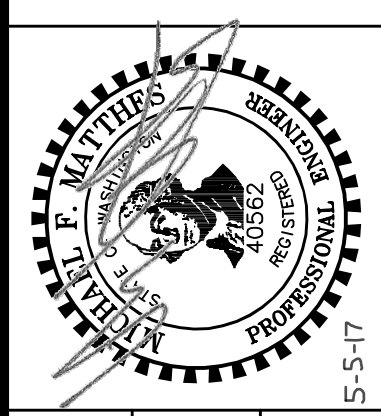
KEYED NOTES

- 1 = SAWCUT EXISTING CONCRETE SIDEWALK.
- 2 = SAWCUT EXISTING CURB & GUTTER.
- 3 = SAWCUT EXISTING ASPHALT TO THE FULL DEPTH OF THE PAVEMENT SECTION
- 4 = REMOVE EXISTING CONCRETE SIDEWALK.
- 5 = REMOVE EXISTING CURB & GUTTER.
- 6 = REMOVE EXISTING ASPHALT.
- 7 = REMOVE APPROX. 260 LF EXISTING AC WATER MAIN. SEE NOTE #12.
- 8 = PROTECT (3) 2-IN. STEEL DRAINS OR REMOVE & REPLACE IN KIND.
- 9 = PROTECT EXISTING TREES & VEGETATION (TYP).
- 10 = REMOVE TRAFFIC CONTROL SIGNAL CONDUIT AND LOOPS FOR CONSTRUCTION. REPLACE IN KIND WHEN PAVING PER DETAIL C SHEET C5.3. SEE SPECIFICATIONS FOR RECORD DOCUMENTS.
- 11 = REMOVE EXISTING CLAY TILE SEWER MAIN.
- 12 = REMOVE SUFFICIENT AC MAIN TO INSTALL 8" BLIND FLANGE ON SW FLANGE OF 12" x 8" CROSS. RESTRAIN WITH THRUST BLOCK PER COF STD. DRAWING W-3. NOTE: ANY WORK REQUIRING WATER SHUT DOWN MUST BE PERFORMED AT NIGHT. COORDINATE WORK WITH CITY.
- 13 = EXISTING AC MAIN TO BE ABANDONED IN PLACE. PLUG BOTH ENDS OF ABANDONED AC MAIN WITH CONCRETE PER WSDOT 7-08.3(4).
- 14 = REMOVE EXISTING SSMH.
- 15 = REMOVE EXISTING BIKE RACK AS NEEDED & REPLACE IN KIND.
- 16 = SAWCUT EXISTING CONCRETE.
- 17 = REMOVE EXISTING SDCB.
- 18 = REMOVE EXISTING SS SERVICE FROM MANHOLE TO ROW.
- 19 = REMOVE EXISTING SS SERVICE FROM MAIN TO ROW.
- 20 = PROTECT EXISTING VALVE TO REMAIN.
- 21 = APPROXIMATE LOCATION OF 16.5' DEEP MONITORING WELL TO BE ABANDONED PER PROJECT SPECIFICATIONS.
- 22 = PROTECT EXISTING WALL AND RAIL TO REMAIN.

DEMOLITION NOTES:

1. NO UTILITY DEMOLITION OR OTHER DEMOLITION WORK MAY BE PERFORMED AT UTILITY SERVICE LOCATIONS UNTIL UTILITY COMPANIES OR OPERATORS HAVE REMOVED THEIR UNDERGROUND AND ABOVE GRADE SERVICE EQUIPMENT AND HAVE NOTIFIED THE CONTRACTOR IN WRITING THAT THERE ARE NO UTILITY ITEMS REMAINING ON THE SITE THAT COULD POSE A HAZARD DURING WORK OF THIS CONTRACT OR IN THE FUTURE AND THAT ANY UTILITY COMPANY OR OPERATOR EQUIPMENT REMAINING ON THE SITE IS ABANDONED AND MAY BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
2. PROVIDE ACCESS FOR UTILITY COMPANIES OR OPERATORS THROUGHOUT THE PROJECT AS REQUIRED TO PERFORM WORK, INCLUDING BUT NOT LIMITED TO: DISCONNECTION OF SERVICE TO BUILDINGS ON THE SITE; DISCONNECTION, DE-ENERGIZATION OR ISOLATION OF ON-SITE SERVICE MAINS FROM UTILITY DISTRIBUTION SYSTEM; RELOCATION OF SERVICE TO OTHER (OFF-SITE) AREAS; AND REMOVAL OF METERS, CABLES, VALVES, SWITCHES AND OTHER UTILITY/OPERATOR-OWNED EQUIPMENT. PROTECT UTILITIES ON THE SITE UNTIL WORK REQUIRED TO BE PERFORMED BY UTILITY COMPANIES OR OPERATOR IS COMPLETE.
3. CAP UTILITY PIPING OR CONDUIT WITH FITTING TO MATCH EXISTING PIPING OR CONDUIT MATERIAL. PRESSURE TEST WATER LINES IN ACCORDANCE WITH UTILITY COMPANY OR OPERATOR REQUIREMENTS. STAKE AND TAG CAPPED ENDS OF ALL PIPES AND CONDUITS STILL CONNECTED TO A UTILITY COMPANY OR OPERATOR SERVICE MAIN, MANHOLE OR VAULT.
4. LOCAL UTILITY COMPANY OR OPERATOR TO REMOVE ELECTRICAL FEEDERS, CABLES, SWITCHGEARS AND TRANSFORMERS PRIOR TO COMMENCEMENT OF THESE WORKS. SYSTEM MUST NOT BE ENERGIZED. CONTRACTOR TO CONFIRM PRIOR TO ANY REMOVAL AND NOTIFY OWNER IF FOUND TO BE OTHERWISE.
5. PROTECT SIDEWALK, SIGNS, CURB AND GUTTER TO REMAIN.
6. PROTECT ASPHALT PAVING TO REMAIN, UNLESS OTHERWISE NOTED.
7. ALL BACKFILL MATERIAL SHALL BE ONSITE MATERIAL OR IMPORT MATERIAL INSTALLED AND COMPACTED AS APPROVED BY THE CITY.
8. CONTRACTOR TO ENSURE ANY SLOPE EXCAVATION DOES NOT INTERFERE WITH IMPROVEMENTS INDICATED TO BE PROTECTED.
9. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE BUILDING CODE REQUIREMENTS, OSHA, AND ALL APPLICABLE REGULATORY REQUIREMENTS.
10. SIDEWALK DEMOLITION TO OCCUR ALONG EXISTING JOINTS IN CONCRETE EXCEPT AS NOTED PER KEYNOTE 1, THIS SHEET.
11. ALL TREES AND VEGETATION, PUBLIC & PRIVATE, ARE TO BE PROTECTED FOR THE DURATION OF THE PROJECT.
12. EXISTING AC WATER MAIN SHALL BE REMOVED & DISPOSED OF IN ACCORDANCE WITH APPLICABLE CITY, COUNTY, AND STATE REQUIREMENTS. NOTE: AC (ASBESTOS CEMENT) IS A KNOWN HAZARDOUS MATERIAL!
13. ALL UTILITY SERVICES SHALL REMAIN UNINTERRUPTED DURING CONSTRUCTION.

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DRAWN BY	JCS
CHECKED BY	

CITY OF FERNDALE, WA
 WASHINGTON
 FERNDALE
 THIRD AVENUE STORMWATER IMPROVEMENTS
 DEMOLITION PLAN

FOR CONSTRUCTION

DATE	4-10-2017
SCALE	AS SHOWN
JOB NUMBER	2014-014

SHEET C3.1 OF 17



FOR CONSTRUCTION



NO.	REVISIONS	BY	DATE

NOTES:

- SEE CITY OF FERNDAL NOTES ON COVER SHEET FOR SPECIFIC DIRECTION AND CITY STANDARD DETAILS.
- REPLACE ANY REMOVED TRAFFIC/SIGNAL UNDERGROUND (IN PAVEMENT) FACILITIES IN KIND. COORDINATE WITH CITY OF FERNDAL PUBLIC WORKS.
- WATER & SEWER SERVICE SHALL NOT BE INTERRUPTED DURING BUSINESS HOURS. SEE WATER NOTE #5 AND SEWER NOTE #9, SHEET C0.1. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY LABOR, MATERIALS, EQUIPMENT OR OTHER TO FACILITATE THIS REQUIREMENT.

STATIONED KEYED NOTES

(A) = STA 1+32.08, 40.76' LT: BEGIN STANDARD CURB. FLOWLINE TO MATCH.

(B) = REPLACE REMOVED HMA UP TO STA 1+40.00 WITH 3.5" HMA. GRADE TO MATCH EXISTING.

(C) = STA 1+32.16, 40.43' RT: BEGIN STANDARD CURB. FLOWLINE TO MATCH.

(D) = STA 1+40.00, 17' LT & 17' RT: END CURB RETURN. BEGIN PERVIOUS CONCRETE SECTION. BEGIN 5' CURB TRANSITION FROM INVERTED TO STANDARD.

(E) = STA 2+65.80 RT: TYPE 'B' DRIVEWAY. RETAIN EXISTING WIDTH.

(F) = STA 2+89.48 LT: TYPE 'A' DRIVEWAY. RETAIN EXISTING WIDTH. NOTE REVERSE CROSS SLOPE.

(G) = STA 3+65.00, 17' LT & 17' RT: BEGIN CURB RETURN. END PERVIOUS CONCRETE SECTION. BEGIN 5' CURB TRANSITION FROM INVERTED TO STANDARD.

(H) = REPLACE REMOVED HMA BEYOND STA 3+65.00 WITH 3.5" HMA. GRADE TO MATCH EXISTING.

(I) = STA 3+82.78, 19.42' LT & STA 3+82.79, 19.07' RT: END CURB & GUTTER. FLOWLINES TO MATCH.

KEYED NOTES

(1) = HMA PAVEMENT. SEE TYPICAL SECTION SHEET C4.3.

(2) = 8' CONCRETE SIDEWALK

(3) = 8' PERVIOUS CONCRETE

(4) = INVERTED CURB & GUTTER

(5) = REPLACE EXISTING 8" SS SERVICE WITH 8" PVC TO EDGE OF RIGHT-OF-WAY. INSTALL CLEANOUT PER DETAIL B/C5.1 AND RECONNECT TO PRIVATE SERVICE LINE. COORDINATE WITH CITY & CUSTOMER.

(6) = PROPOSED 12" DI WATER - MINIMUM 10' FROM SEWER.

(7) = REPLACE EXISTING WATER SERVICE WITH 2" COPPER WATER SERVICE PER DETAIL A, SHEET C5.1. INSTALL NEW CURB STOP. EXISTING METER SETTER AND VAULT TO REMAIN.

(8) = 12" TEE AND THRUST BLOCK

(8A) = REPLACE EXIST TEE W/ NEW 12" TEE AND INSTALL 12" GATE VALVE AS SHOWN, AND REDUCERS AS REQUIRED. PRESERVE EXISTING GATE VALVE. COORDINATE W/ CITY.

(9) = REPLACE EXISTING 3/4" WATER SERVICE W/ 1" COPPER WATER SERVICE. 1" COPPER TO PASS THROUGH GRAVEL STORAGE BED, ABOVE 6" PERF DRAIN IN 20"-4" C900 PVC SLEEVE. COORDINATE EXACT LOCATION WITH CITY.

(10) = REPLACE CONCRETE CURB TO MATCH NEW HMA.

(11) = 12" GATE VALVE

(12) = TYPE 'A' PARALLEL CURB RAMP PER WSDOT STANDARD PLAN F-40.12-02

(13) = TAPER NEW CURB LIP AS REQUIRED TO MATCH EXISTING.

(14) = RESERVED.

(15) = RESERVED.

(16) = REPLACE EXISTING WATER SERVICE W/ 1" COPPER WATER SERVICE. SEE DETAIL A/C5.1.

(17) = INSTALL BLIND FLANGE.

(18) = RELOCATE WATER METER INTO SIDEWALK AS SHOWN. SEE DETAIL A/C5.1. COORDINATE EXACT LOCATION WITH CITY. REMOVE EXISTING METER BOX & SETTER AND CONNECT NEW SETTER TO EXISTING PRIVATE SERVICE LINE. SEE SHEET C5.2 FOR METER BOX DETAILS.

(19) = REPLACE EXISTING CLAY TILE SEWER MAIN W/ 8" PVC.

(20) = ADJUST RIM OF SSMH #1441 TO NEW GRADE.

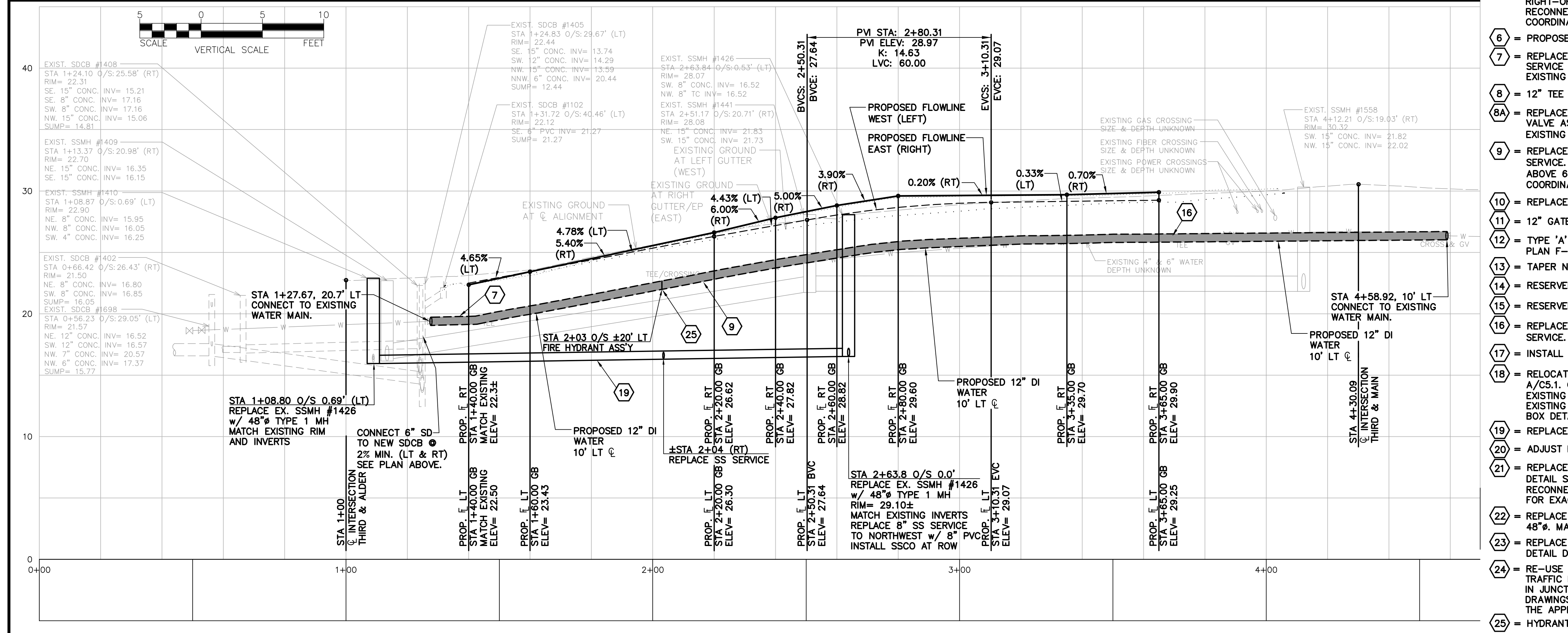
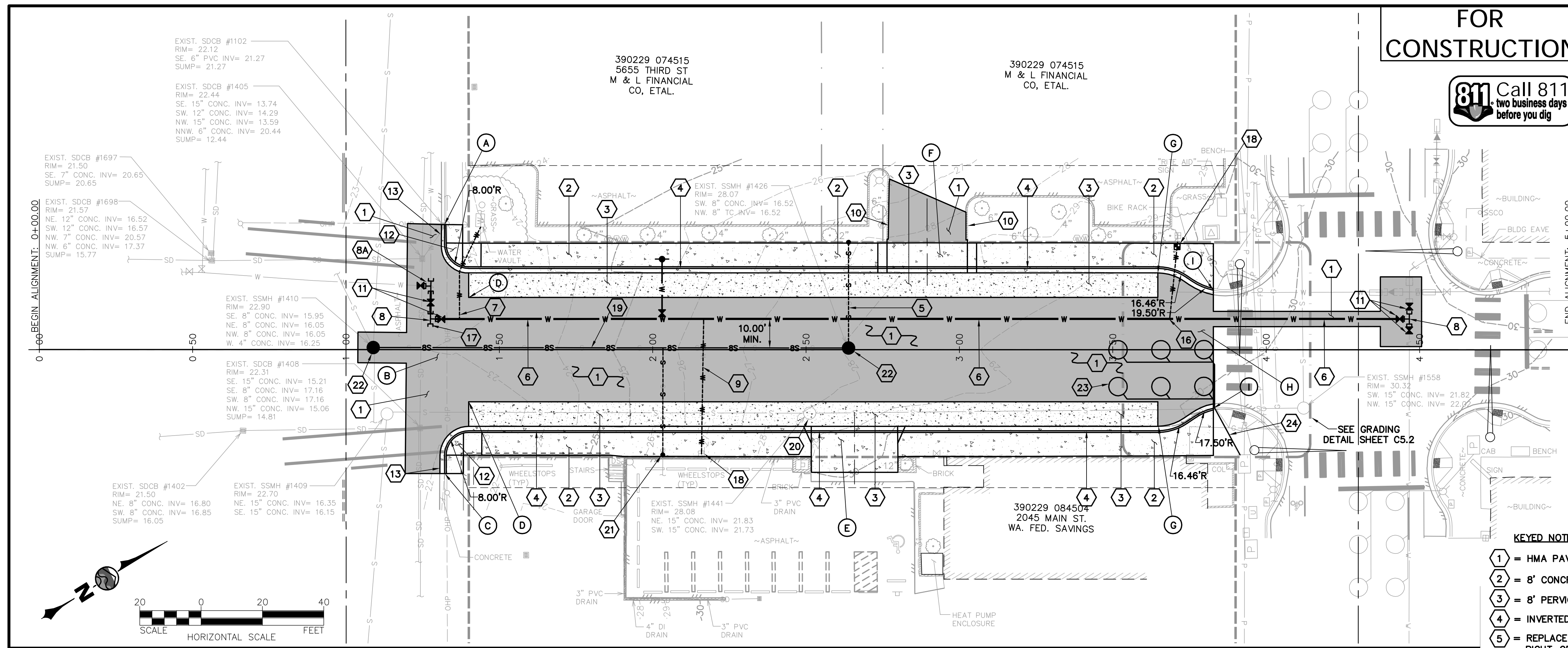
(21) = REPLACE EXISTING SS SERVICE WITH 6" PVC PER COF STD DETAIL SS-6. INSTALL 6" CLEANOUT AT ROW PER DETAIL B/C5.1. RECONNECT EXISTING SERVICE AT ROW. COORDINATE WITH CITY FOR EXACT CONNECTION POINT.

(22) = REPLACE EXISTING SSMH PER WSDOT STD. PLAN B-15.20-01, 48"Ø. MATCH EXISTING INVERTS.

(23) = REPLACE EXISTING TRAFFIC LOOPS & CONDUITS IN KIND PER DETAIL D/C5.3.

(24) = RE-USE EXISTING CONDUIT FROM CURB TO JUNCTION BOX FOR TRAFFIC LOOP WIRING. INSTALL NEW WIRING AND RE-DO SPLICE IN JUNCTION BOX TO EXISTING CONDUCTOR CABLES. AS-BUILT DRAWINGS OF THE EXISTING TRAFFIC LOOPS ARE INCLUDED IN THE APPENDICES OF THE PROJECT SPECIFICATIONS.

(25) = HYDRANT ASSEMBLY PER COFSD W-1 AND THRUST BLOCK.



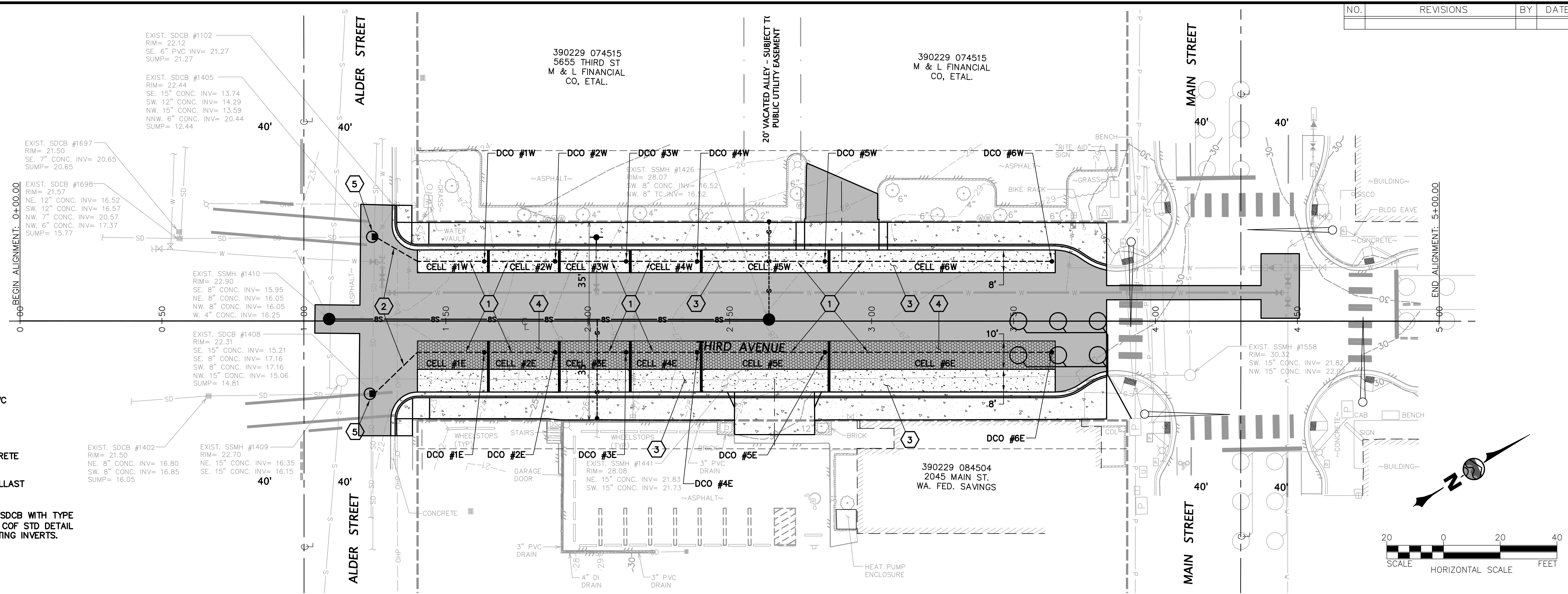
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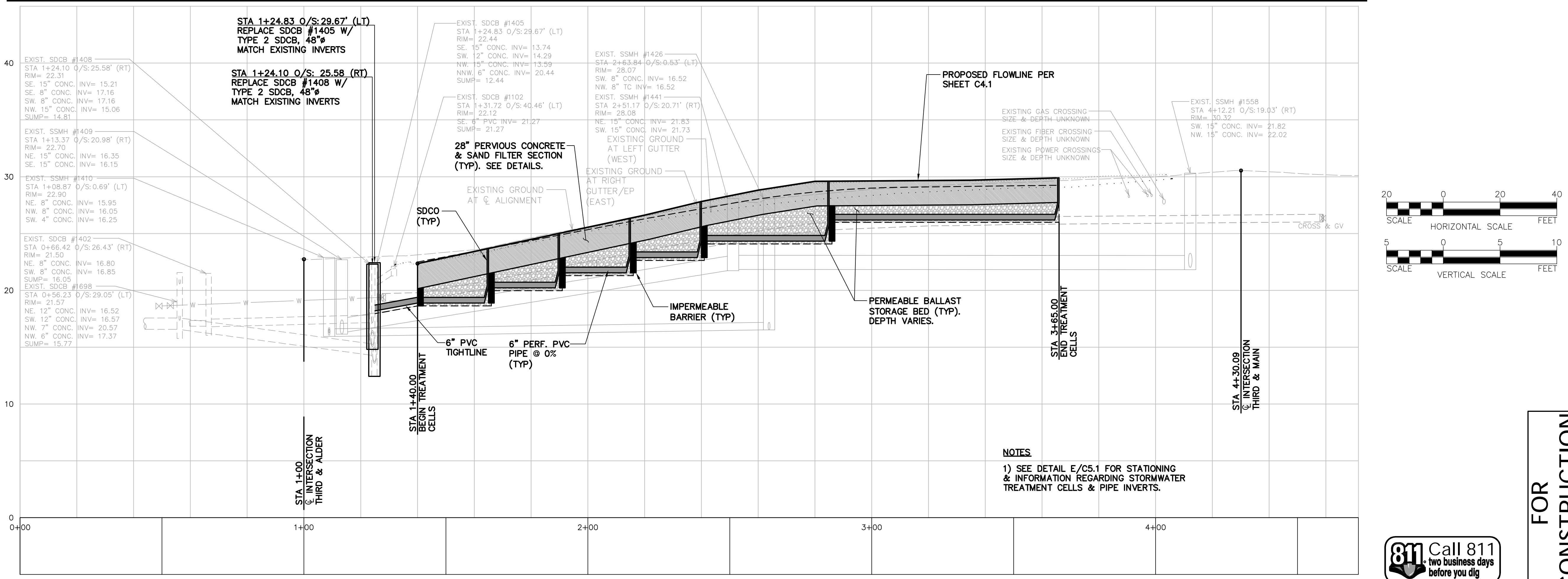
CITY OF FERNDAL, WA
 WASHINGTON
 FERNDAL
 THIRD AVENUE STORMWATER IMPROVEMENTS
 PLAN & PROFILE - ROAD & UTILITIES

DESIGNED BY: MFM
 DRAWN BY: JGS
 CHECKED BY: []

DATE: 4-10-2017
 SCALE: AS SHOWN
 SHEET: C4.1 OF 17
 JOB NUMBER: 2014-014



- KEYED NOTES**
- 1 = 6" PERFORATED PVC
 - 2 = 6" TIGHTLINE PVC
 - 3 = 8" PERVIOUS CONCRETE
 - 4 = 10' PERMEABLE BALLAST STORAGE BED
 - 5 = REPLACE EXISTING SDCB WITH TYPE 2 SDCB, 48" PER COF STD DETAIL ST-2. MATCH EXISTING INVERTS.



NOTES
 1) SEE DETAIL E/C5.1 FOR STATIONING & INFORMATION REGARDING STORMWATER TREATMENT CELLS & PIPE INVERTS.



FOR CONSTRUCTION

C4.2
 OF **17**

CITY OF FERNDALE, WA
WASHINGTON
THIRD AVENUE STORMWATER IMPROVEMENTS
PLAN & PROFILE - STORMWATER FACILITIES

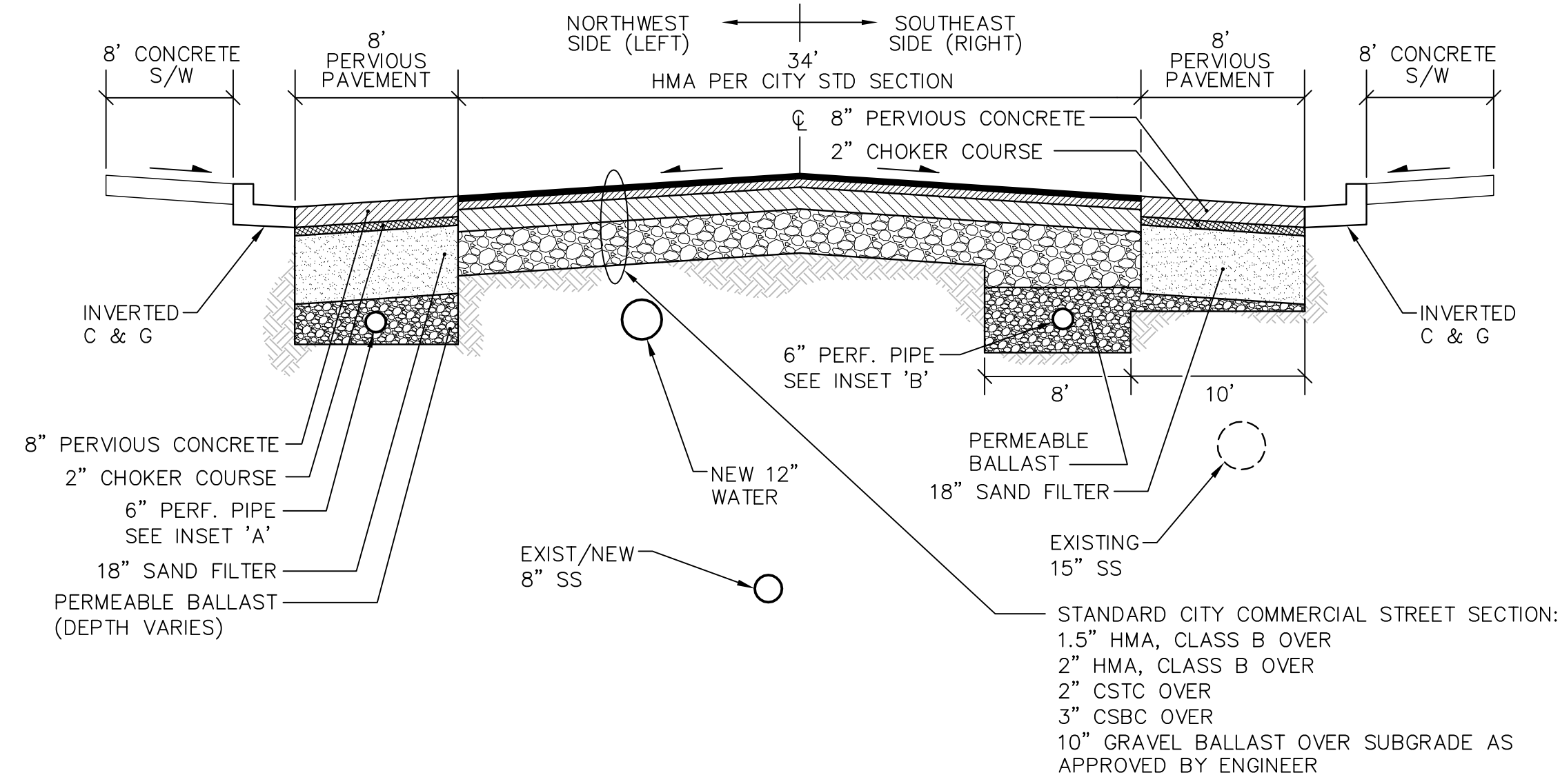
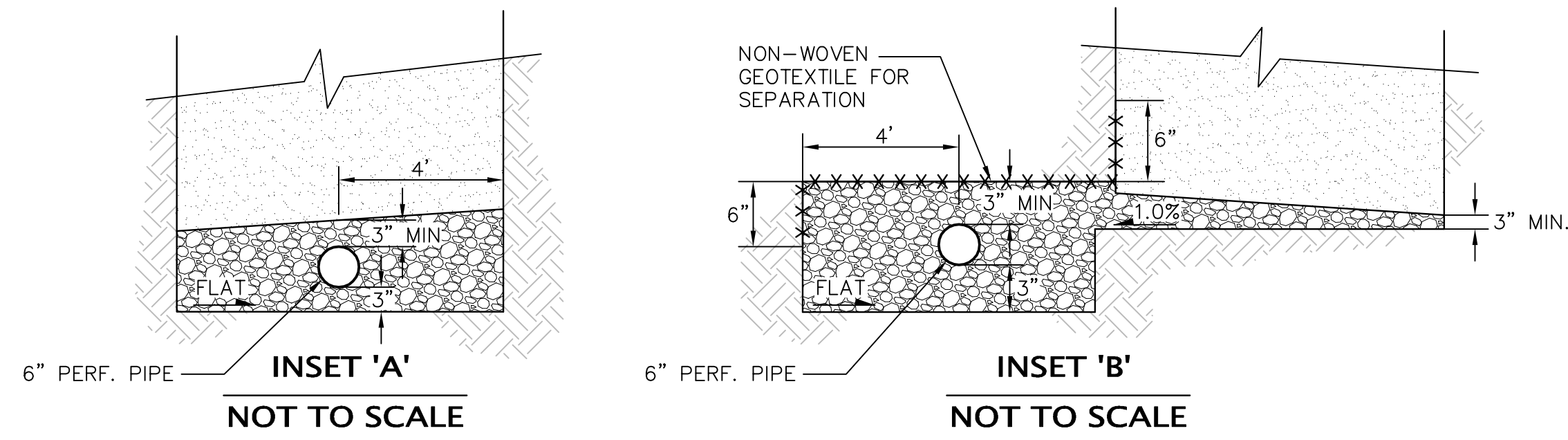
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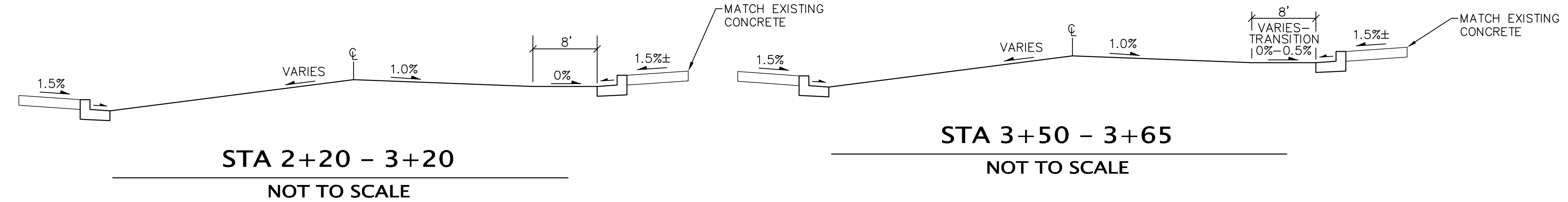
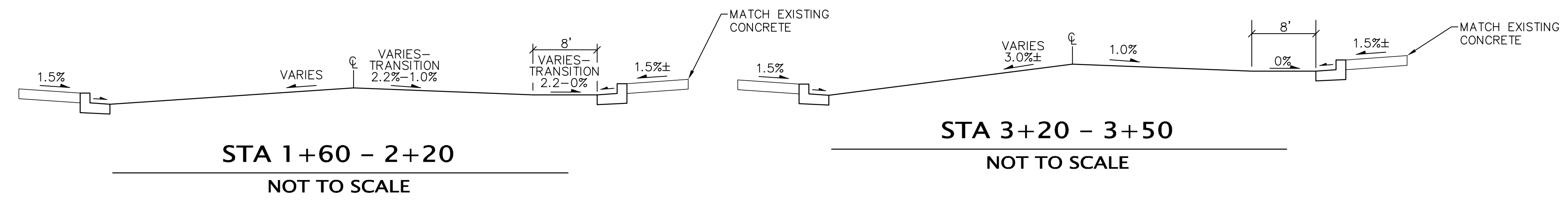
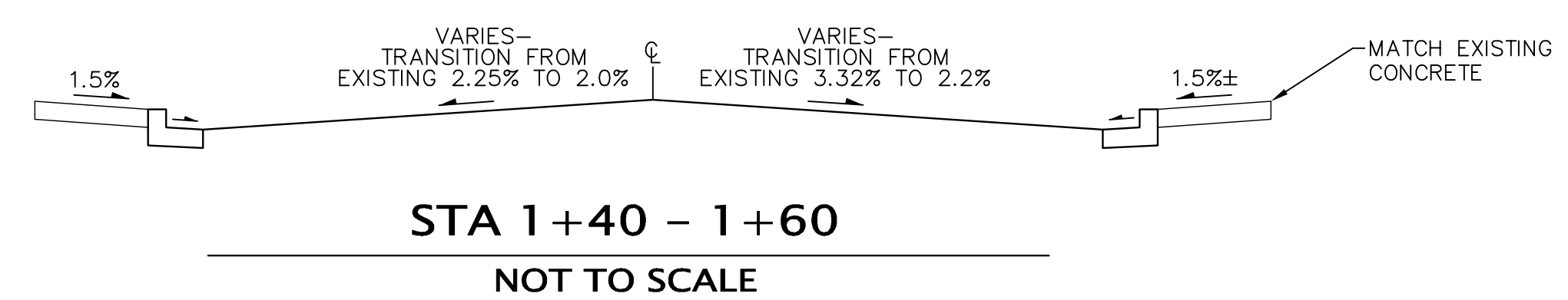
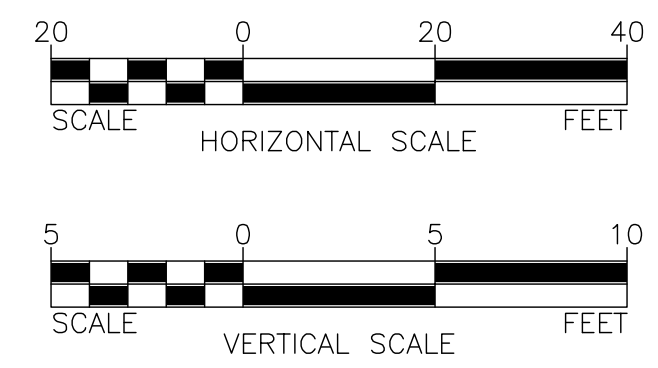
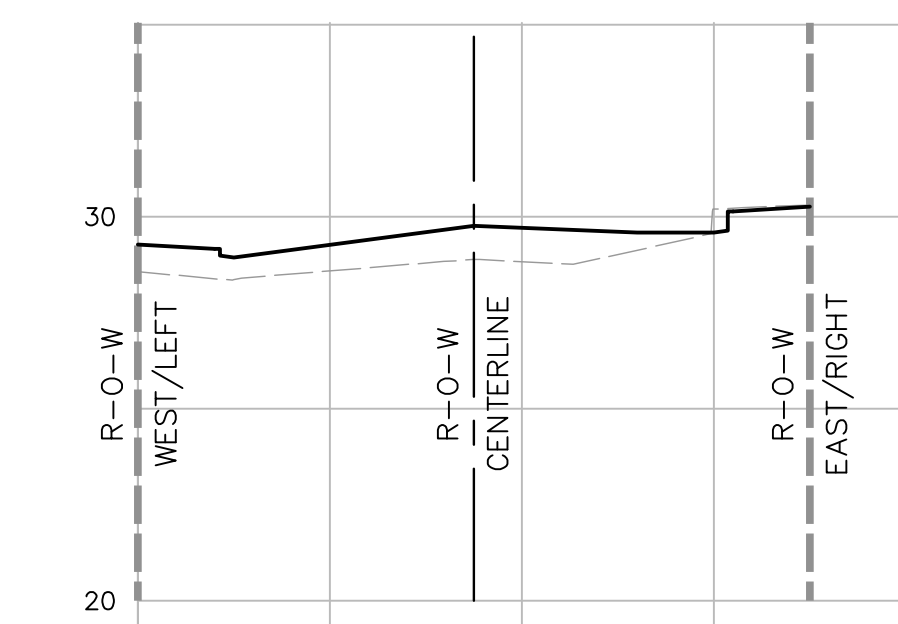
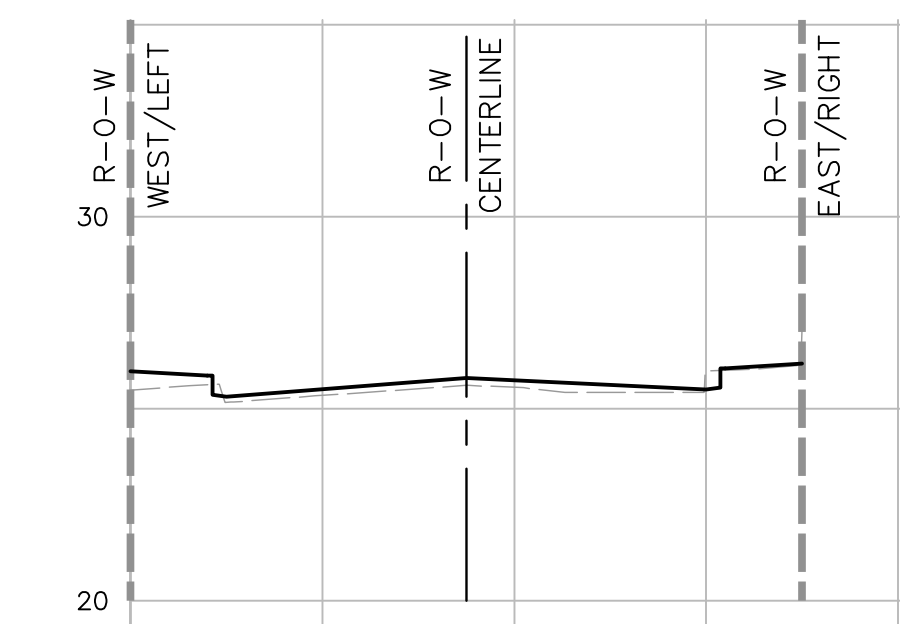
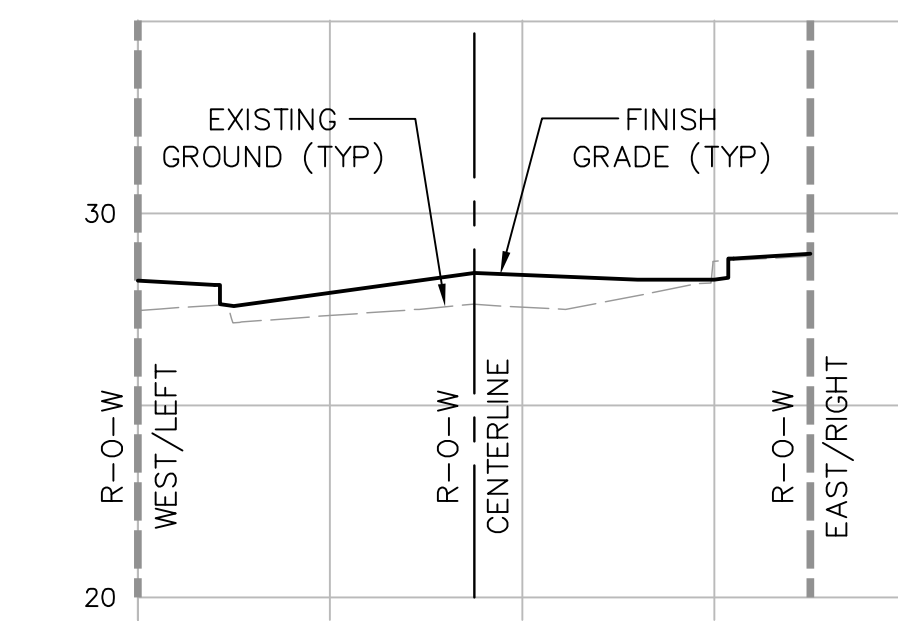
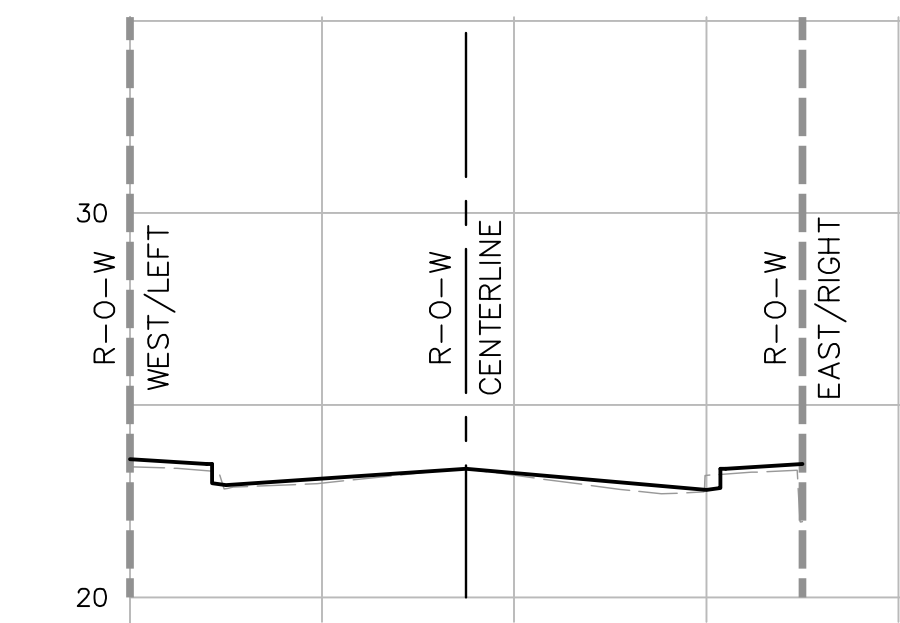
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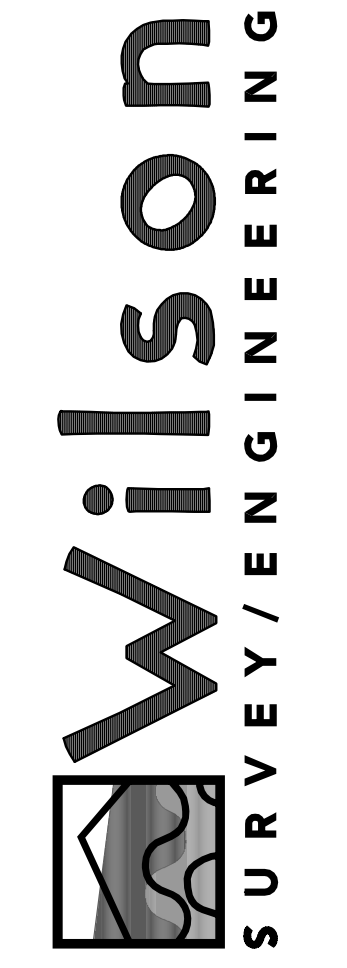
- NOTES:
- 1) SEE SPECIFICATIONS FOR PREPARATION OF SUBGRADE UNDER PERMEABLE BALLAST.
 - 2) ALL REMAINING SUBGRADE NOT UNDER PERMEABLE BALLAST SHALL BE AS APPROVED BY ENGINEER.
 - 3) SEE DETAIL C, SHET C5.1 FOR GEOTEXTILE PLACEMENT AT SAND FILTER.



ROAD CROSS SLOPE SCHEDULE
NOT TO SCALE

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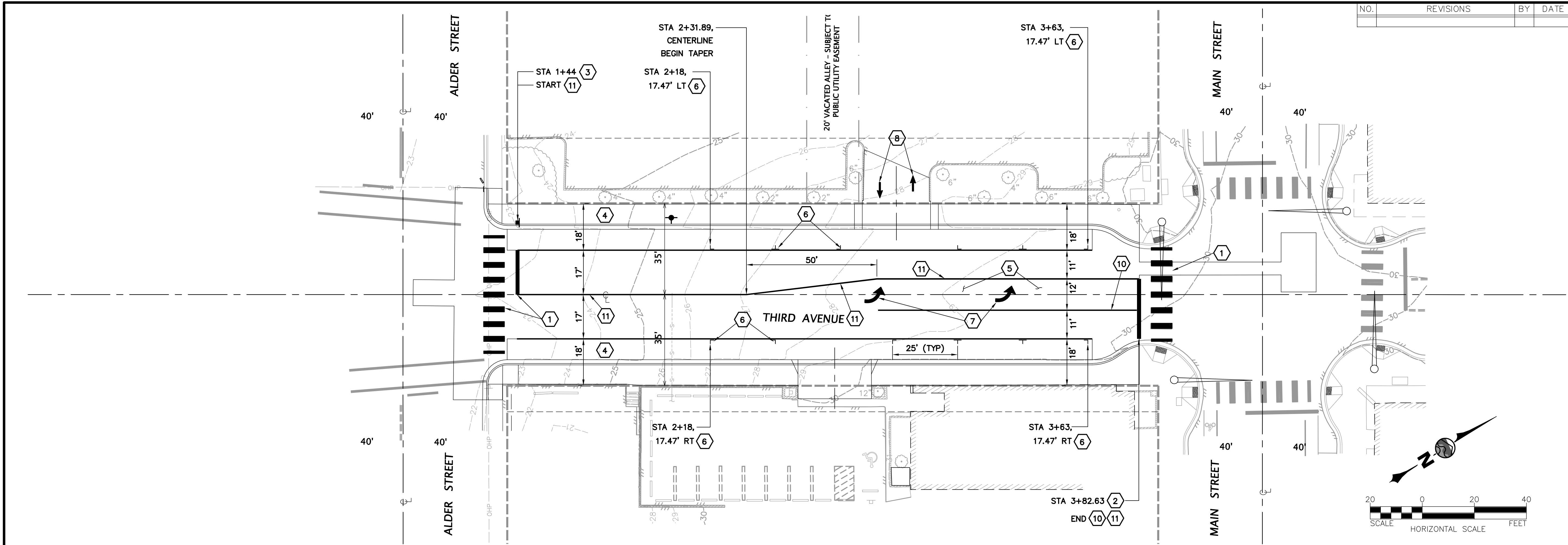
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CITY OF FERNDALE, WA
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 CROSS SECTIONS - THIRD STREET

FOR CONSTRUCTION

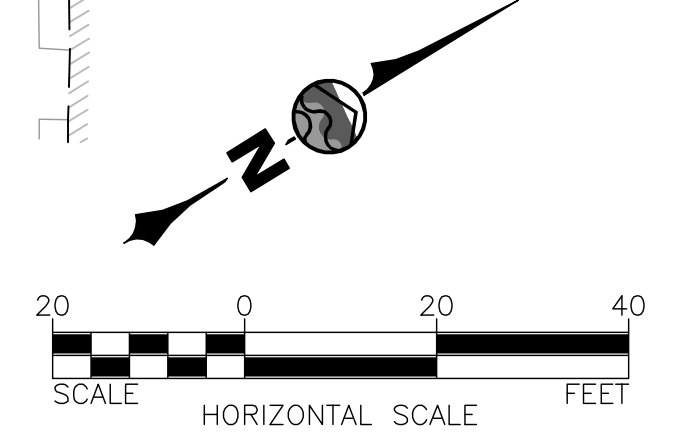
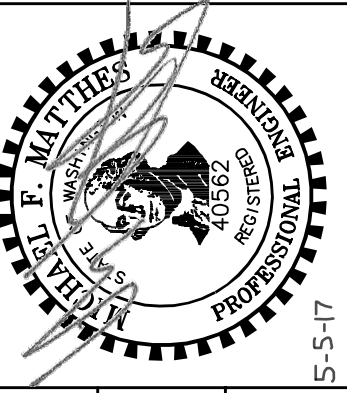
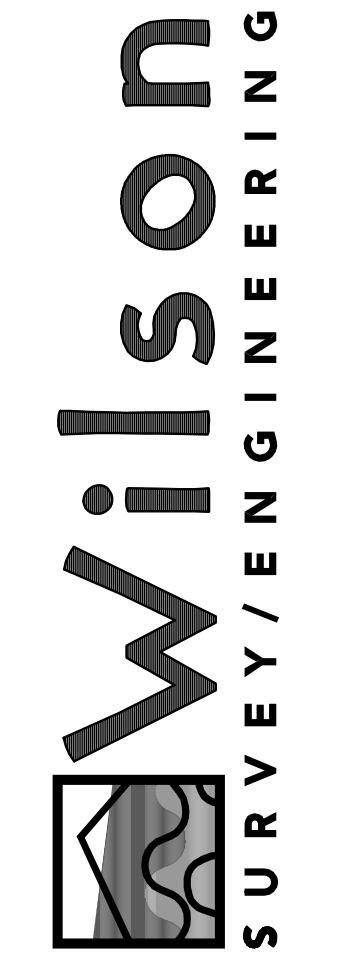
DATE	4-10-2017	SCALE	AS SHOWN	JOB NUMBER	2014-014
SHEET	C4.3	OF	17		





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KEYED NOTES

- ① = STOP BAR & CROSSWALK PER WSDOT STANDARD PLAN M-15.10-01. ☉ CROSSWALK STA 1+35, AND REPLACE EXISTING STOP BAR & CROSSWALK ☉ STA 3+90.
- ② = RESERVED.
- ③ = STOP SIGN (R1-1, 30") AND POST
- ④ = WTA BUS STOP - SIGNAGE & STRIPING BY OTHERS
- ⑤ = LEFT TURN CHANNELIZATION PER WSDOT STANDARD PLAN M-3.40-03. EXCLUDE DOTTED LINE EXTENSION.
- ⑥ = PARALLEL PARKING STRIPING (TYP). MATCH CITY STANDARD FOR GEOMETRY.
- ⑦ = TYPE 2SL (LEFT) TRAFFIC ARROW PER WSDOT STANDARD PLAN M-24.40-01
- ⑧ = REPLACE PRIVATE STRIPING ARROWS IN KIND
- ⑨ = RESERVED.
- ⑩ = WIDE LANE LINE (WHITE) RPMs PER WSDOT STANDARD PLAN M-20.50-02
- ⑪ = DOUBLE CENTERLINE (YELLOW) RPMs PER WSDOT STANDARD PLAN M-20.50-02

NOTES

1. ALL SIGNAGE & STRIPING SHALL BE PER THE MUTCD 2009 EDITION WITH CURRENT MODIFICATIONS. ALL PAVEMENT STRIPING SHALL BE THERMOPLASTIC AND HIGH GRADE REFLECTIVITY.
2. SIGN POSTS SHALL BE TYPE ST-2 PER WSDOT STANDARD PLAN G-24.50-03, UNLESS DIRECTED OTHERWISE BY CITY. POST HEIGHT (H) SHALL BE AS REQUIRED FOR EACH LOCATION (MIN 7' FROM BOTTOM OF SIGN TO SIDEWALK/TOP OF GRADE).

FOR CONSTRUCTION

DATE	4-10-2017
SCALE	AS SHOWN
JOB NUMBER	2014-014
SHEET	C4.4
OF	17

CITY OF FERNDALE, WA
 FERNDALE WASHINGTON
THIRD AVENUE STORMWATER IMPROVEMENTS
SIGNAGE & STRIPING PLAN

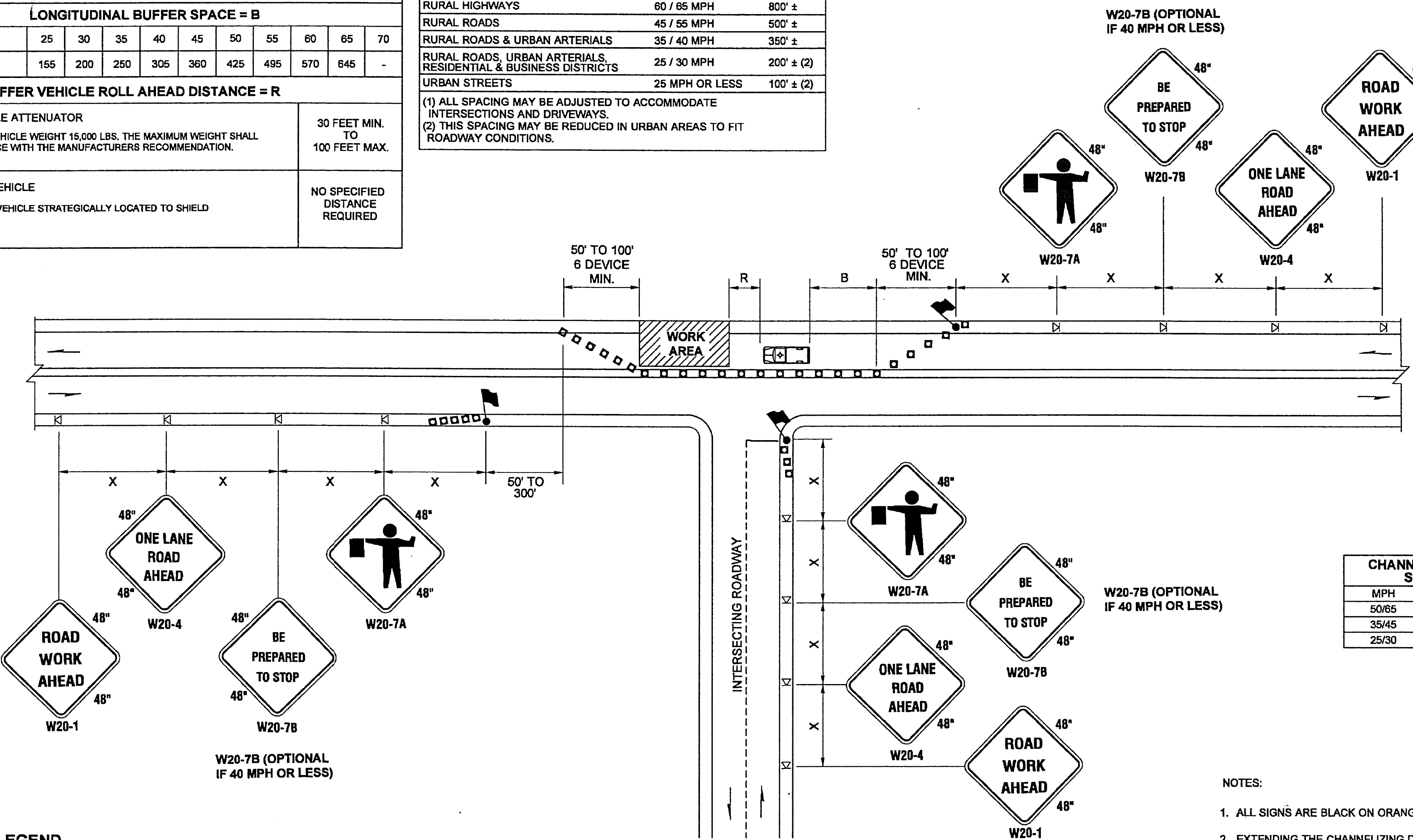


NO.	REVISIONS	BY	DATE

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	-
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.										30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.										NO SPECIFIED DISTANCE REQUIRED

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/65	10 to 20	80
35/45	10 to 20	60
25/30	10 to 20	40

- NOTES:
- ALL SIGNS ARE BLACK ON ORANGE
 - EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
 - NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
 - SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

- LEGEND
- FLAGGING STATION
 - TEMPORARY SIGN LOCATION
 - CHANNELIZING DEVICES
 - PROTECTIVE VEHICLE

ONE-LANE, TWO-WAY TRAFFIC CONTROL WITH FLAGGERS

NOT TO SCALE

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-1\TC-1.dgn	REGION NO.	10	STATE	WASH	FED.AID PROJ.NO.		Plot 1	TC1
TIME	10:39:41 AM								
DATE	5/17/2013								
PLOTTED BY	CyfordL								
DESIGNED BY									
ENTERED BY									
CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.									
REVISION		DATE		BY					



TRAFFIC CONTROL PLAN



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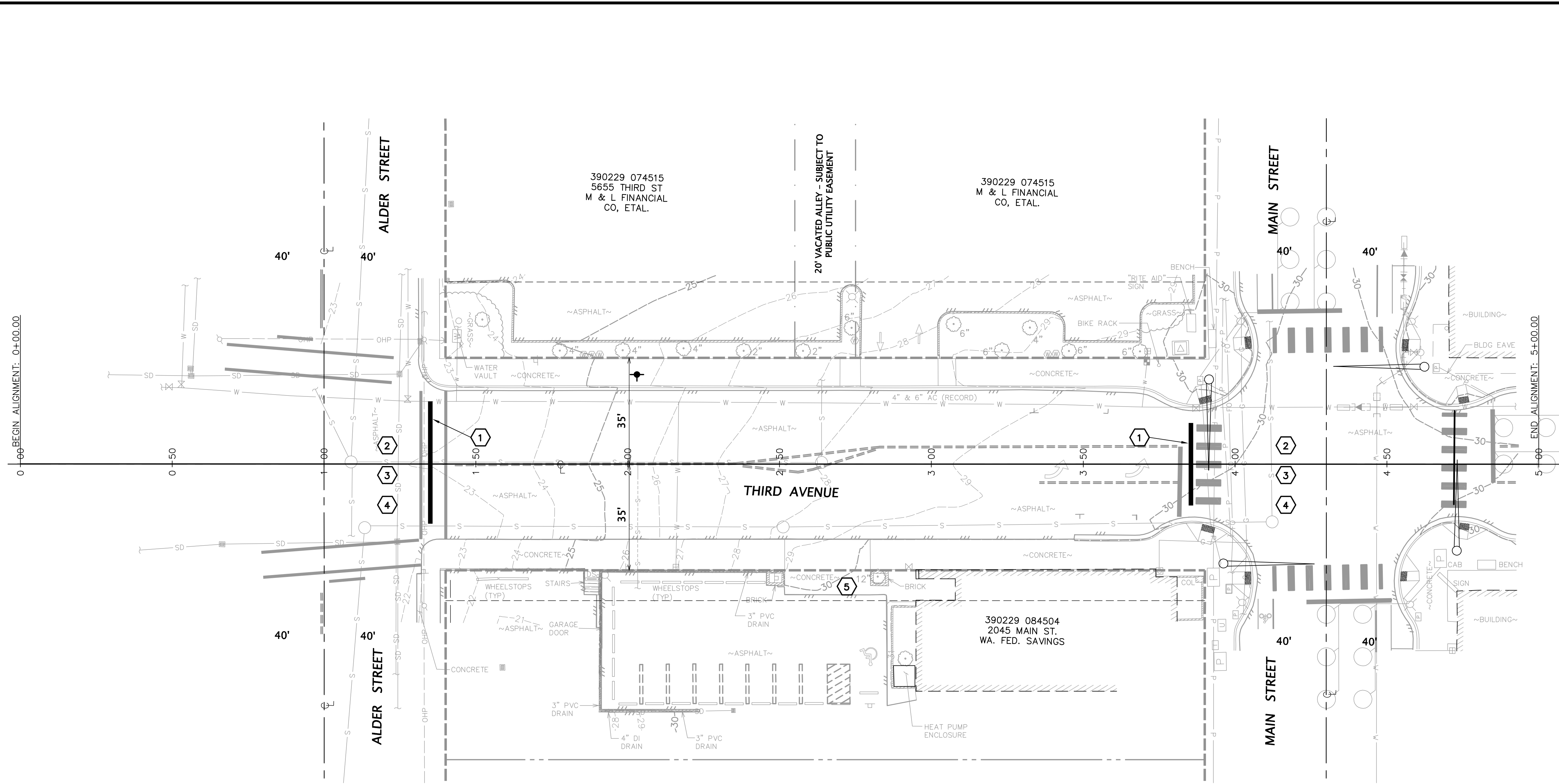
DESIGNED BY: MEM
DRAWN BY: JCS
CHECKED BY:

CITY OF FERNDALE, WA
WASHINGTON
THIRD AVENUE STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN DETAILS

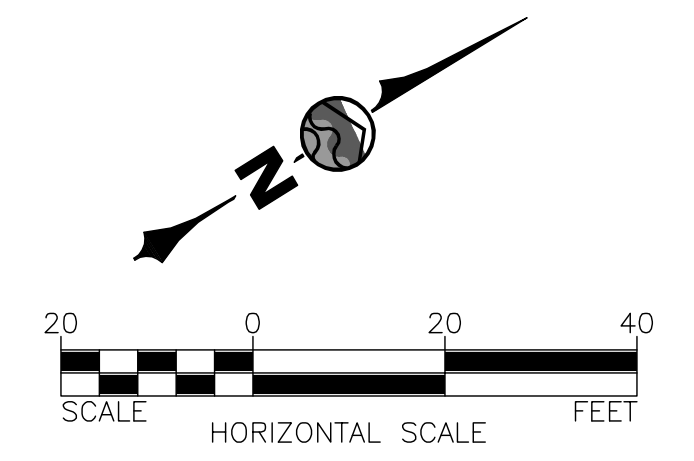
FOR CONSTRUCTION

DATE: 4-10-2017
SCALE: AS SHOWN
JOB NUMBER: 2014-014

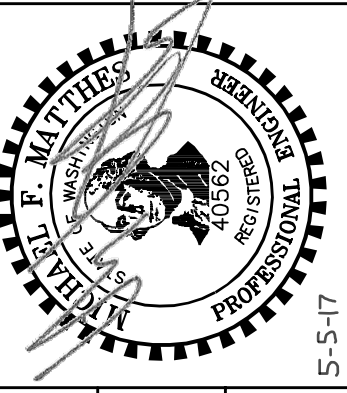
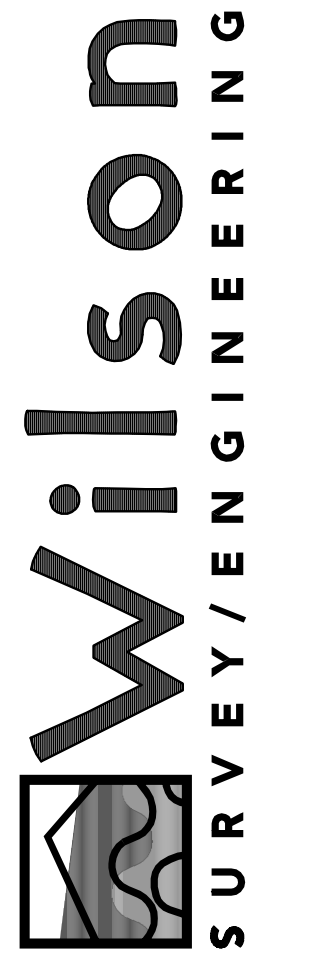
SHEET 17 OF 17



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 TRAFFIC CONTROL PLAN

FOR CONSTRUCTION SHEET

DATE: 4-10-2017
 SCALE: C4.5
 AS SHOWN
 JOB NUMBER: 2014-014
 OF 17



KEYED NOTES

- ① = TYPE 3 BARRICADE PER WSDOT STANDARD PLAN K-80.20-00
- ② = INTERSECTION PEDESTRIAN CONTROL PER WSDOT STANDARD PLAN TC16
- ③ = INTERSECTION LANE CLOSURE PER WSDOT STANDARD PLAN TC14
- ④ = ONE LANE, TWO WAY TRAFFIC CONTROL PER WSDOT STANDARD PLAN TC1
- ⑤ = SEE NOTE #13

NOTES

1. CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN COORDINATED WITH CONSTRUCTION PHASING & ANY REQUIRED DETOURS TO THE CITY OF FERNDALE AT LEAST 14 DAYS PRIOR TO CONSTRUCTION FOR REVIEW.
2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING ALL TRAFFIC CONTROL MEASURES NECESSARY TO ASSURE THE CONTINUED SAFE AND EFFICIENT MOVEMENT OF TRAFFIC THROUGH AND AROUND THE PROJECT AREA INCLUDING THE RELATED DETOURS.
3. MODIFICATIONS TO THE TRAFFIC CONTROL PLAN ARE PERMITTED IF THE CHANGES IMPROVE TRAFFIC SAFETY AND EFFICIENCY. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AN UP-TO-DATE TRAFFIC CONTROL PLAN THAT REFLECTS ALL CHANGES.
4. TRAFFIC CONTROL MEASURES SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION, THE CURRENT WSDOT STANDARD SPECIFICATIONS, THE WSDOT SIGN MANUAL, AND THE LATEST EDITION OF THE WSDOT STANDARD PLANS.
5. CONTRACTOR SHALL MAINTAIN LOCAL ACCESS TO ALL PROPERTY DURING CONSTRUCTION. OBTAIN PROPERTY OWNER APPROVAL PRIOR TO STARTING ANY WORK THAT WILL DELAY OWNER ACCESS MORE THAN 15-MINUTES.
6. NOTIFY WHATCOM TRANSPORTATION AUTHORITY (WTA) OF CONSTRUCTION. THIRD AVENUE IS ON A WTA BUS ROUTE THAT WILL REQUIRE REROUTING.
7. IF ADDITIONAL SIGNAGE IS REQUIRED BEYOND THAT SHOWN, THE CONTRACTOR SHALL PROVIDE AT NO ADDITIONAL COST.
8. TRAFFIC CONTROL INCLUDES CERTIFIED FLAGGERS NECESSARY TO ASSURE MAINTAINING SAFE TRAFFIC FLOW THROUGH AND AROUND THE PROJECT AREA AND THE RELATED DETOURS.
9. MODIFY EXISTING REGULATORY TRAFFIC CONTROL DEVICES FOR THE DURATION OF THE PROJECT.
10. REFERENCE SIGN LEGEND FOR ALL SIGNS NOT SPECIFICALLY DEPICTED ON THE PLAN.
11. ALL SIGNS SHALL BE POST MOUNTED. COLOR SHALL BE BLACK ON ORANGE UNLESS NOTED OTHERWISE.
12. MAIN STREET, INCLUDING THIRD AVE. LEG TO NORTH, AND ALDER STREET, INCLUDING THIRD AVE. LEG TO SOUTH, SHALL REMAIN OPEN TO VEHICULAR AND PEDESTRIAN TRAFFIC AT ALL TIMES.
13. ***THIRD AVE MAY BE CLOSED TO VEHICLES & PEDESTRIAN TRAFFIC DURING CONSTRUCTION PERIOD, WITH THE FOLLOWING EXCEPTION:***
 A) VEHICULAR ACCESS TO WASHINGTON FEDERAL SAVINGS BANK PARKING LOT (5) FROM EITHER MAIN ST. OR ALDER ST. MUST REMAIN OPEN DURING THE BANK'S BUSINESS HOURS. AT BANK'S SOLE DISCRETION, ACCESS CLOSURE FOR UP TO ONE HOUR MAY BE ALLOWED WITH 72 HOUR NOTICE.

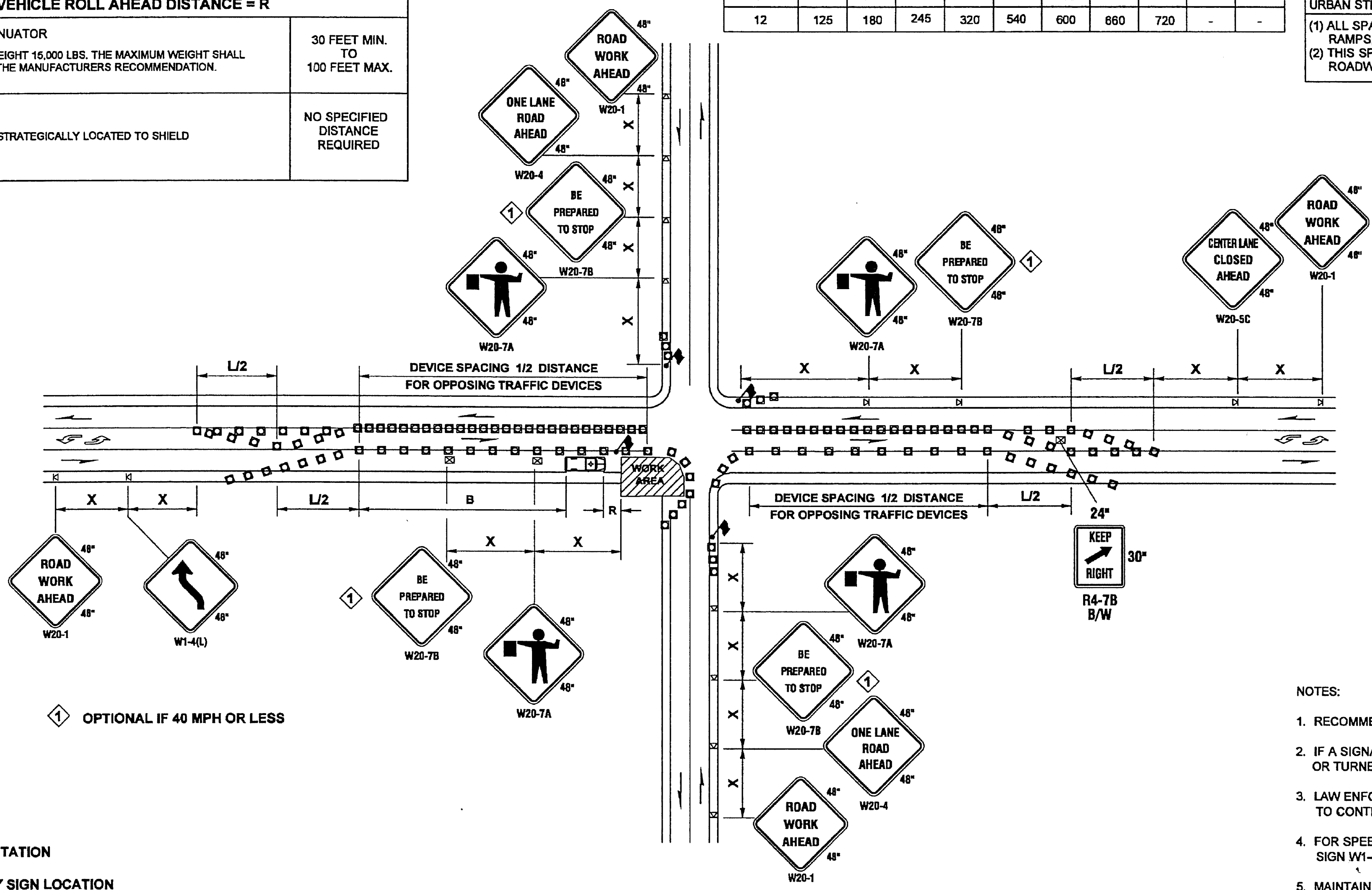
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SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	-
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRANSPORTABLE ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 16,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.										30 FEET MIN. TO 100 FEET MAX.
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.										NO SPECIFIED DISTANCE REQUIRED

LANE WIDTH (feet)	MINIMUM TAPER LENGTH = L (feet)									
	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	-	-

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS	25 / 30 MPH	200' ± (2)
RESIDENTIAL & BUSINESS DISTRICTS		
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40



LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE - RECOMMENDED
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

INTERSECTION LANE CLOSURE ~ THREE LANE ROADWAY

NOT TO SCALE

- NOTES:
- RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
 - IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS.
 - LAW ENFORCEMENT OFFICER MAY BE USED IN LIEU OF FLAGGERS TO CONTROL INTERSECTION TRAFFIC.
 - FOR SPEED LIMIT OF 30 MPH OR LESS USE SIGN W1-3 IN LIEU OF SIGN W1-4.
 - MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
 - ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

FILE NAME	S:\Design R P & S\4-Standard\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-14\TC-14.dgn		
TIME	11:36:56 AM		
DATE	5/17/2013		
PLOTTED BY	CyfordL		
DESIGNED BY			
ENTERED BY			
CHECKED BY			
PROJ. ENGR.			
REGIONAL ADM.			

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
CONTRACT NO.		LOCATION NO.

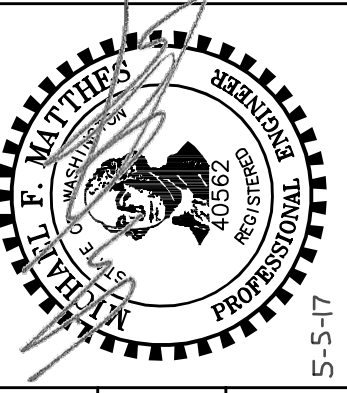
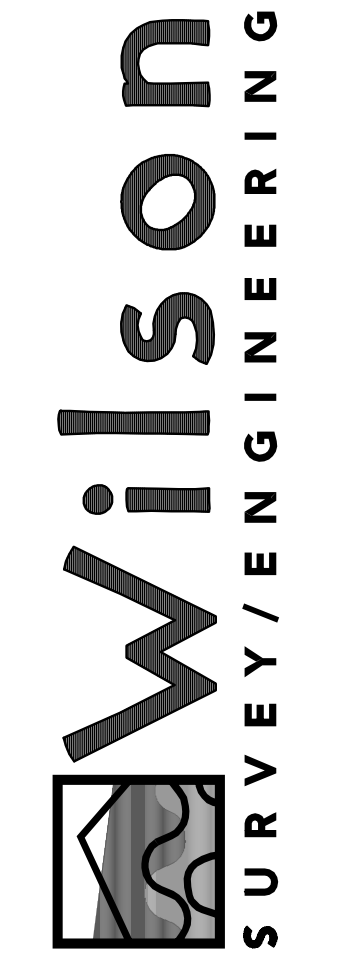
P.E. STAMP BOX	DATE	P.E. STAMP BOX	DATE



TC14
SHEET OF SHEETS
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WASHINGTON
THIRD AVENUE STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN DETAILS

FOR CONSTRUCTION

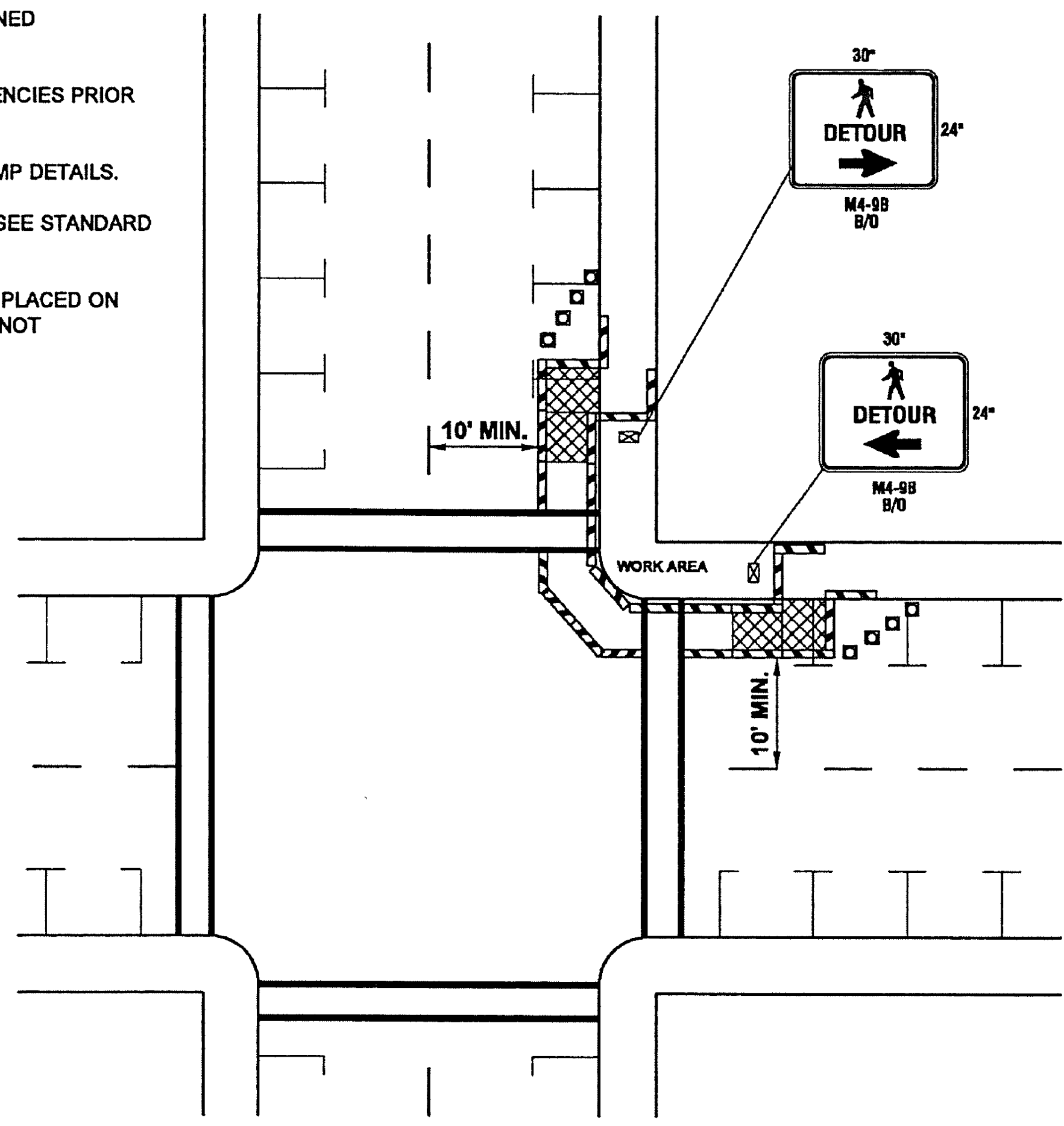
DATE 4-10-2017
SCALE AS SHOWN
JOB NUMBER 2014-014
SHEET 17 OF 17

NO.	REVISIONS	BY	DATE

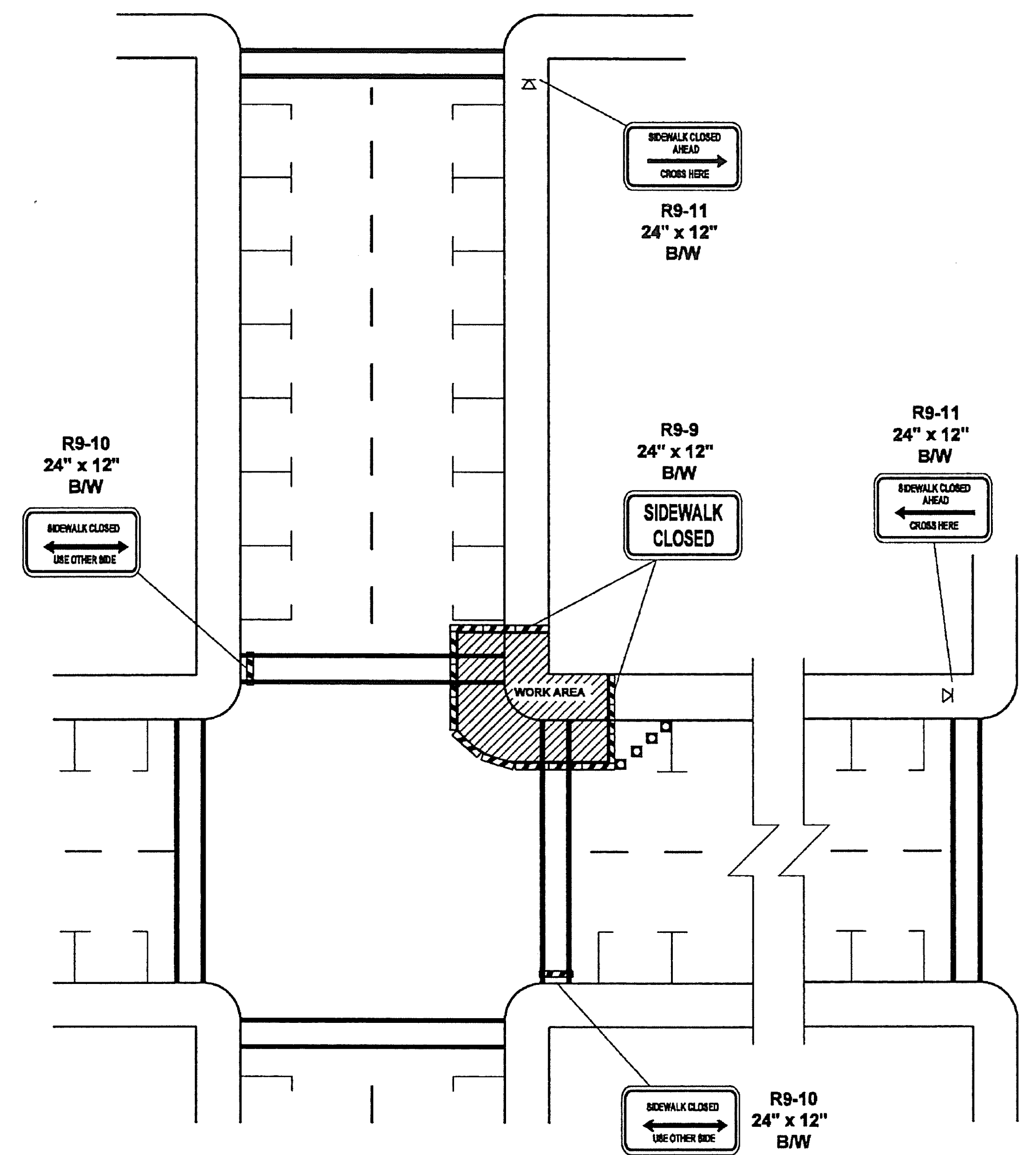
NO PARKING R8-3
24" x 30"
R/W

INSTALL ON TYPE 2 BARRICADES THROUGHOUT THE WORK AREA
24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL.
PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.

- NOTES:
- CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
 - A 80" PEDESTRIAN PATH WIDTH SHOULD BE MAINTAINED (48" IS THE MINIMUM).
 - CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
 - SEE SHEET TC-52 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
 - ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED, SEE STANDARD SPECIFICATION 1-10.2(1)B.
 - TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.



SIDEWALK DIVERSION



SIDEWALK DETOUR

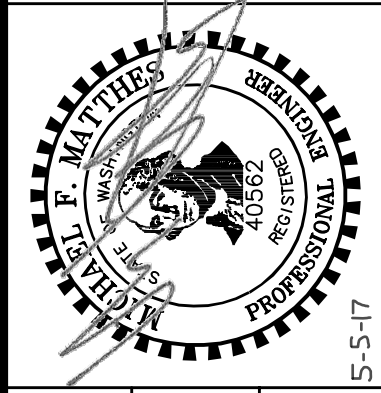
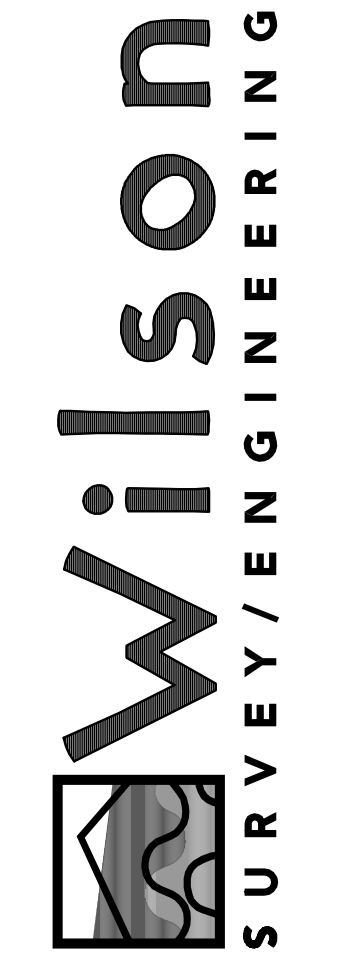
INTERSECTION PEDESTRIAN TRAFFIC CONTROL

NOT TO SCALE

- LEGEND**
- ⊠ TEMPORARY SIGN LOCATION
 - CHANNELIZING DEVICES
 - ▨ PEDESTRIAN CHANNELIZING DEVICES
 - TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

FILE NAME	S:\Design R P & SV-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-16\TC-16.dgn			REGION NO.	STATE	FED.AID PROJ.NO.	Washington State Department of Transportation	PEDESTRIAN CONTROL AND PROTECTION	TC16
TIME	11:43:01 AM			10	WASH				
DATE	5/17/2013			JOB NUMBER					
PLOTTED BY	CyfordL			CONTRACT NO.		LOCATION NO.			
DESIGNED BY									
ENTERED BY									
CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.	REVISION	DATE	BY						

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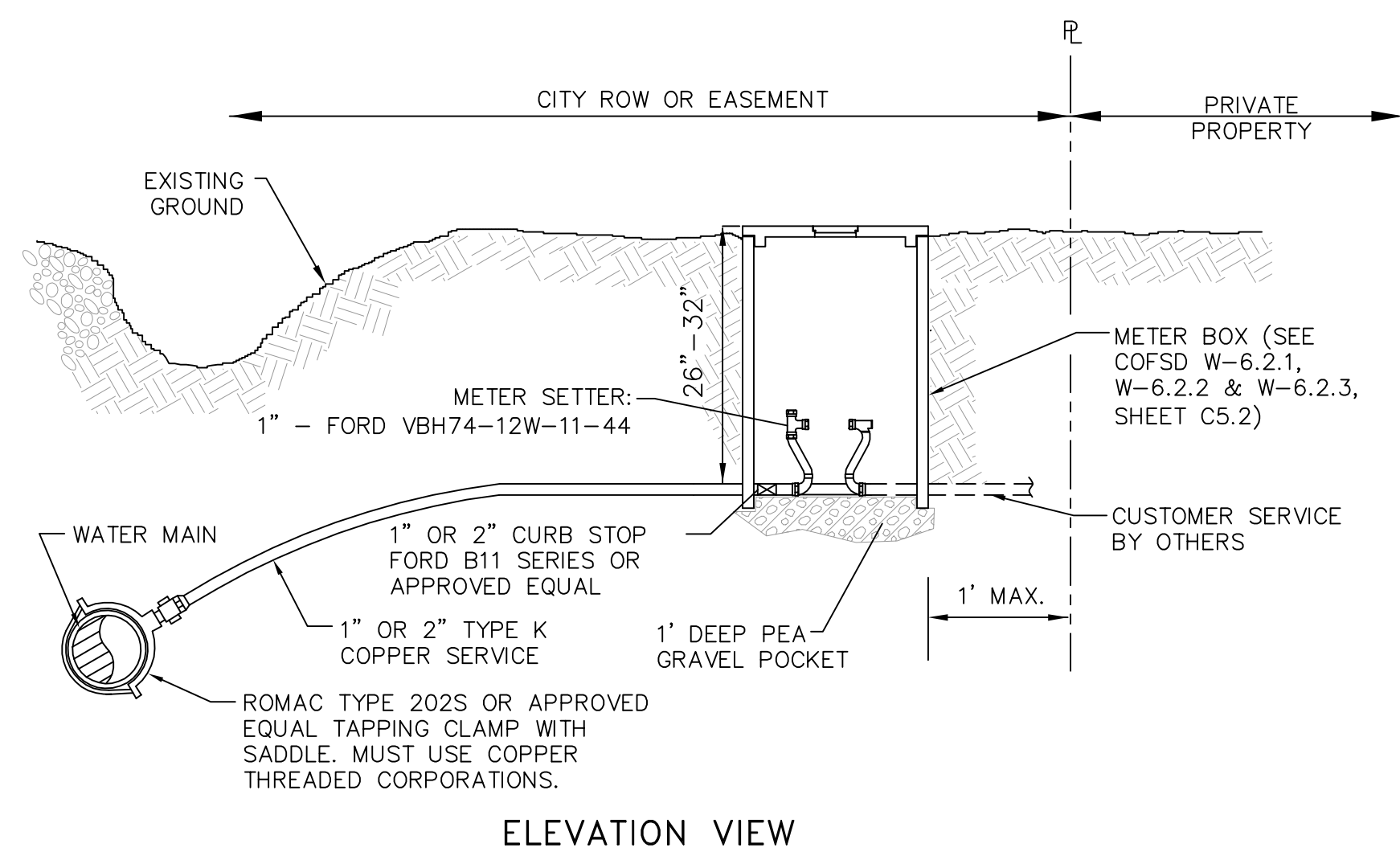
DESIGNED BY MEM
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THIRD AVENUE STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN DETAILS

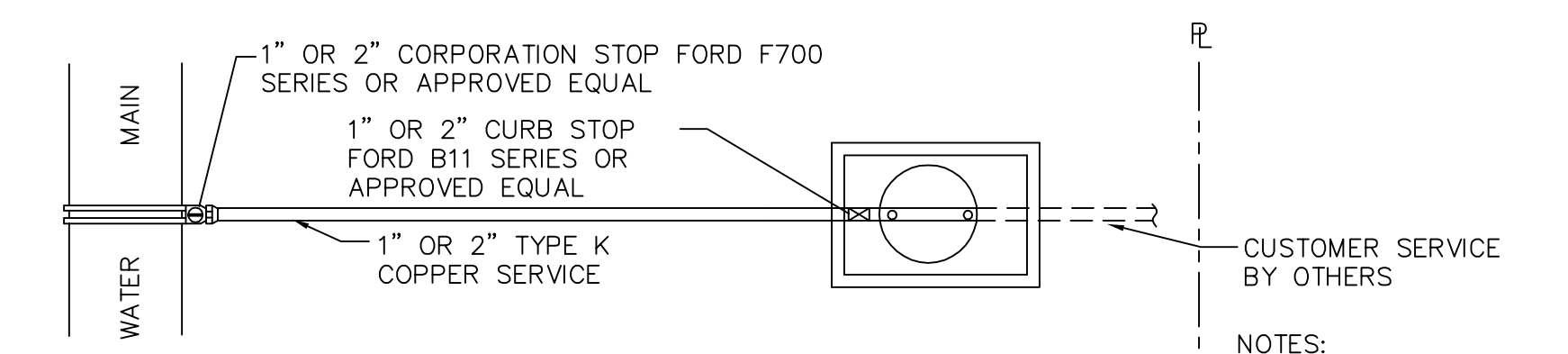
FOR CONSTRUCTION

DATE 4-10-2017
SCALE AS SHOWN
JOB NUMBER 2014-014
SHEET 17 OF 17





ELEVATION VIEW

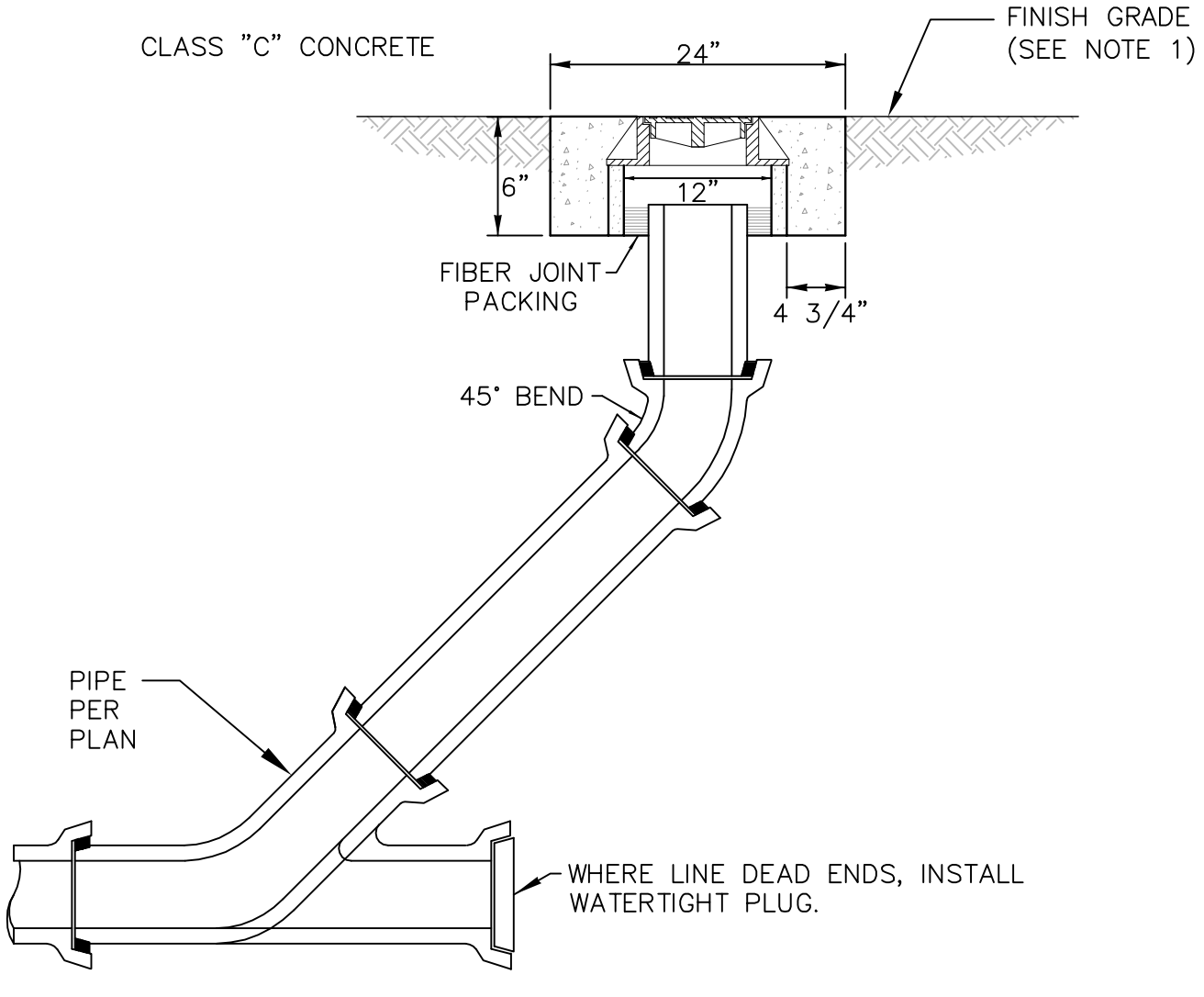


PLAN VIEW

BASED ON COF STANDARD DETAIL W-5

A WATER SERVICE DETAIL
NOT TO SCALE

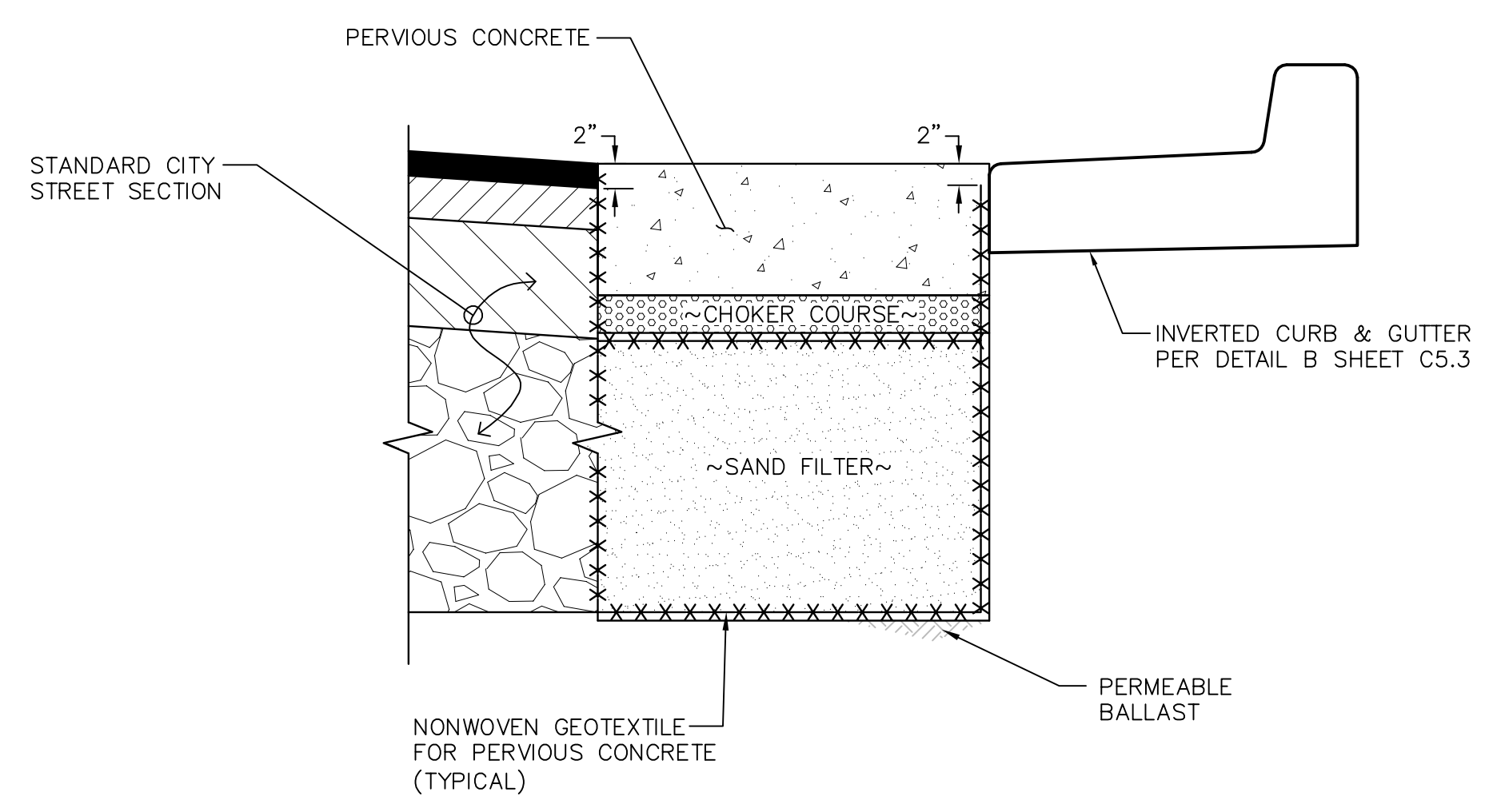
- NOTES:
- METER(S) TO BE FURNISHED AND INSTALLED BY COF.
 - WATER SERVICE TRENCH TO BE BACKFILLED WITH 12" MIN. DEPTH OF CLEAN SANDY FILL.



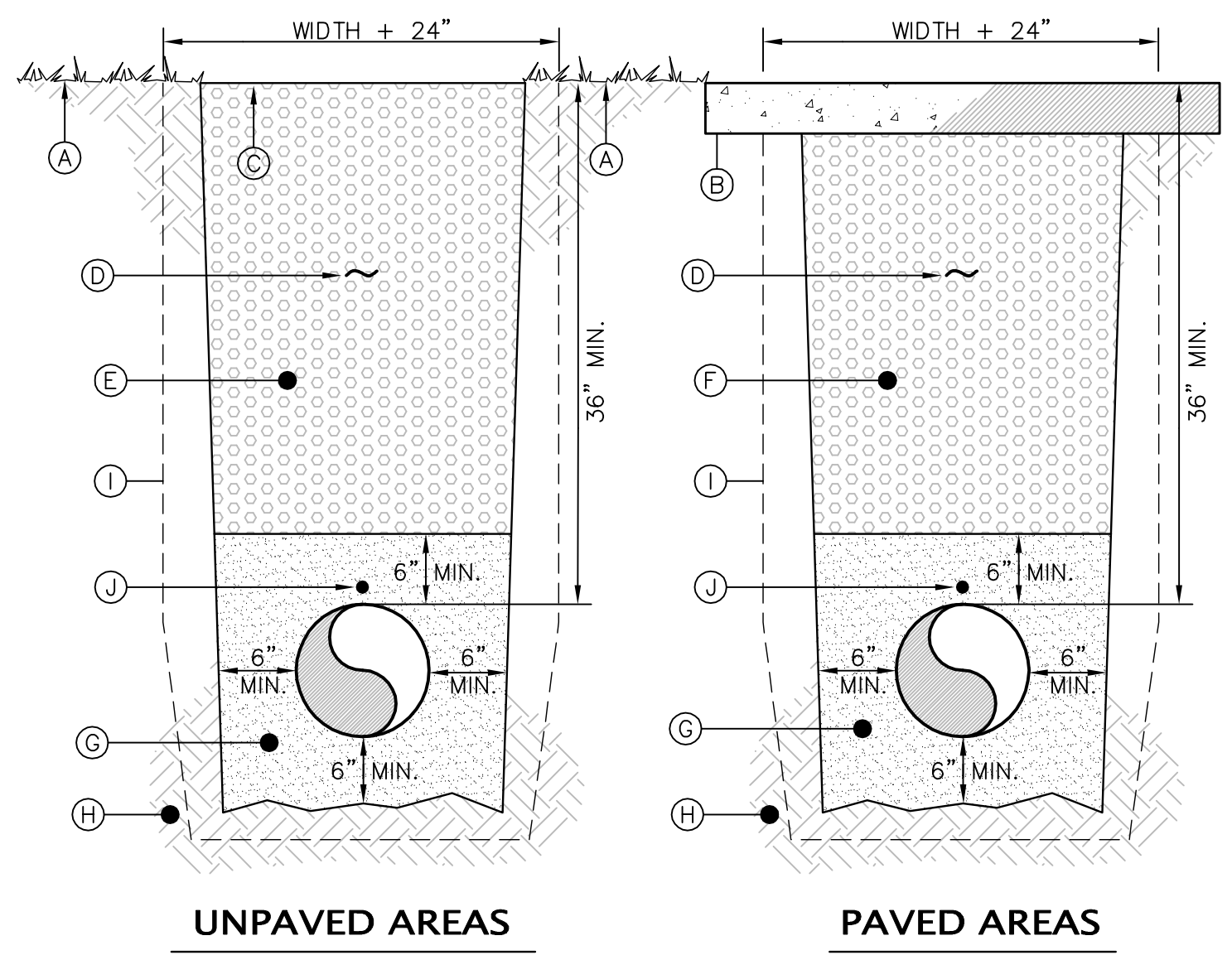
MATCH PIPE MATERIAL AND SIZE (12" MAX.)

- NOTE:
- FOR CLEANOUTS LOCATED IN EITHER SIDEWALK CONCRETE OR PERVIOUS CONCRETE, OMIT THE CLASS "C" CONCRETE COLLAR AND CAST THE CLEANOUT RING AND COVER DIRECTLY INTO THE CONCRETE.

B CLEAN OUT
NOT TO SCALE



C GEOTEXTILE PLACEMENT AT SAND FILTER
NOT TO SCALE



UNPAVED AREAS

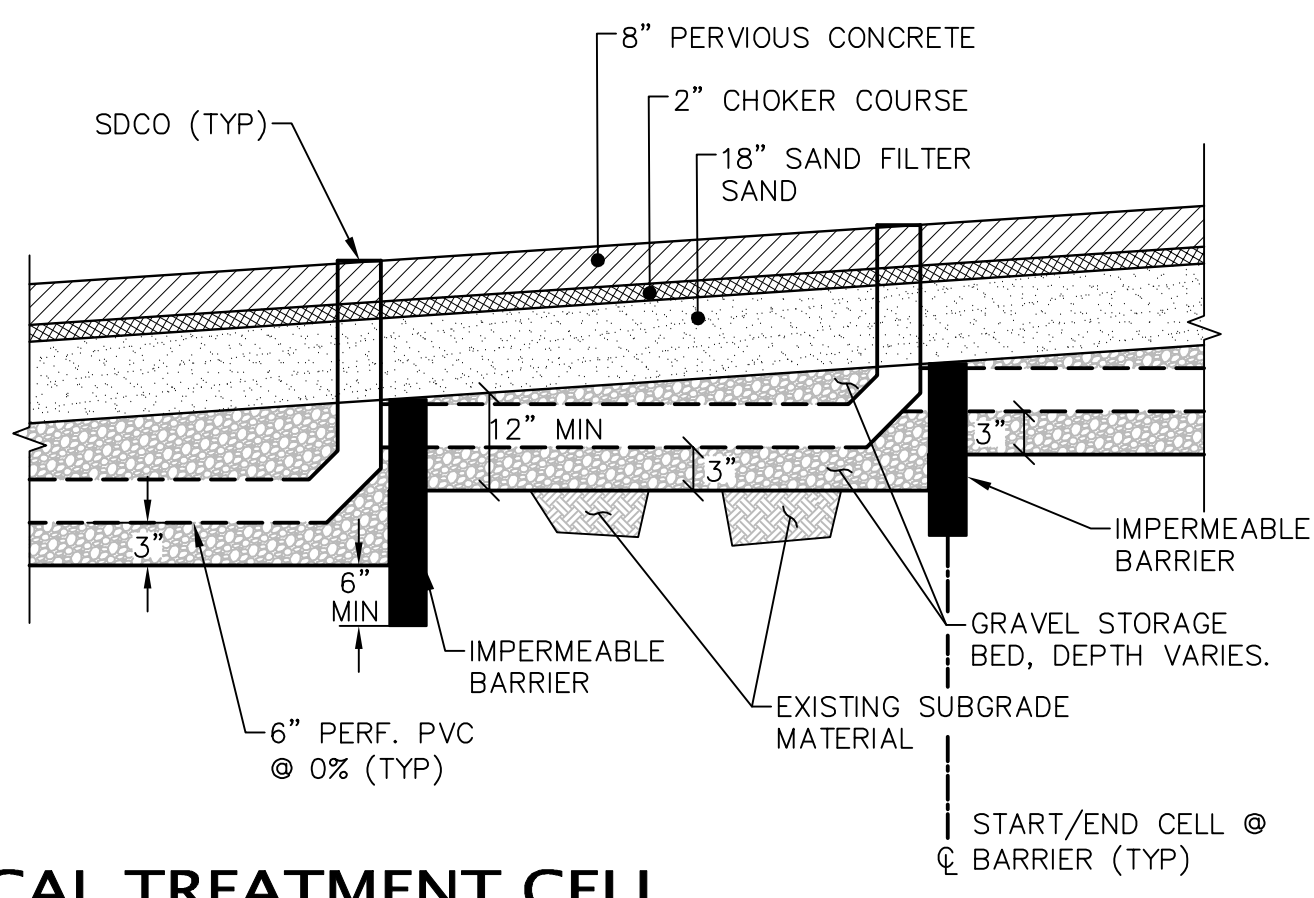
PAVED AREAS

- KEYED NOTES:
- HYDROSEED EXPOSED AREAS.
 - NEW SIDEWALK OR PAVEMENT.
 - NEW LANDSCAPED SURFACE.
 - 2" METALLIC DETECTOR TAPE 8" TO 12" BELOW FINISH GRADE.
 - BANK RUN GRAVEL BACKFILL PER WSDOT 9-03.19 COMPACTED TO 90% MAX. DENSITY INSIDE RIGHT-OF-WAY. NATIVE BACKFILL MATERIAL (8" MAX.) COMPACTED TO 90% MAX. DENSITY PERMITTED OUTSIDE OF RIGHT-OF-WAY.
 - BANK RUN GRAVEL BACKFILL PER WSDOT 9-03.12(3) COMPACTED TO 95% MAX. DENSITY.
 - PIPE ZONE GRAVEL BEDDING PER WSDOT 9-03.12(3) COMPACTED TO 95% MAX. DENSITY.
 - UNDISTURBED NATIVE MATERIAL.
 - ROCK EXCAVATION PAY LIMITS COMPACTED TO 90% MAX. DENSITY.
 - #10 AWG INSULATED TRACER WIRE STUBBED TO GROUND LEVEL EVERY 1000 FEET.

D TYPICAL TRENCHING & BACKFILL
OTHER THAN SEWER & WATER
REFER TO SEWER AND WATER NOTES SHEET CO.1 AND COF STD DETAILS FOR SEWER & WATER

- CONSTRUCTION NOTES:
- IMPERMEABLE BARRIER TO BE 12" THICK TRENCH DAM: 1 PART BENTONITE TO 4 PARTS SILTY SOIL.
 - IMPERMEABLE BARRIER TO BE KEYED INTO EXISTING NATIVE SOIL (INCLUDING IN ABANDONED WATER MAIN TRENCH) A MINIMUM OF 6" BOTH HORIZONTAL & VERTICAL.
 - INITIAL EXCAVATION OF THE GRAVEL STORAGE BED SHALL BE CONDUCTED WITHIN 1-FOOT OF THE FINISH SUBGRADE. EXCAVATE THE BED TO THE FINAL SUBGRADE ELEVATION ONLY AFTER ALL DISTURBED AREAS IN THE UPGRADE PROJECT DRAINAGE AREA HAVE BEEN STABILIZED. THE FINAL PHASE OF EXCAVATION SHALL REMOVE ALL ACCUMULATION OF SILT IN THE GRAVEL STORAGE BED BEFORE PLACING THE GEOTEXTILE LAYER AND SAND FILTER LAYER. AFTER CONSTRUCTION IS COMPLETE, PREVENT SEDIMENT FROM ENTERING THE PERVIOUS CONCRETE AREA.
 - DO NOT USE THE GRAVEL STORAGE BED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION.
 - CONSTRUCTION TRAFFIC - ONLY VERY LIGHT-TRACKED EQUIPMENT SHALL BE USED FOR GRADING OPERATIONS TO AVOID COMPACTION OF THE SUBGRADE BELOW THE GRAVEL STORAGE BED. THE USE OF DRAGLINES AND TRACKHOES SHALL BE CONSIDERED FOR GRADING OPERATIONS. THE SUBGRADE BELOW THE GRAVEL STORAGE BED SHALL BE FLAGGED OR MARKED TO KEEP HEAVY EQUIPMENT AWAY.
 - SEE PROJECT SPECIFICATIONS FOR PERVIOUS CONCRETE, CHOKER COURSE, & SAND FILTER SAND.

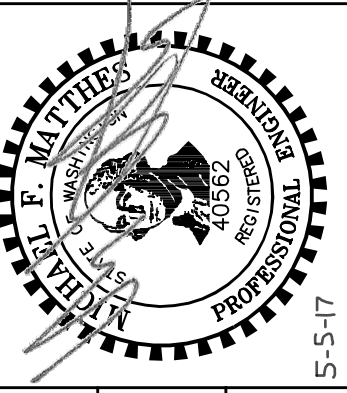
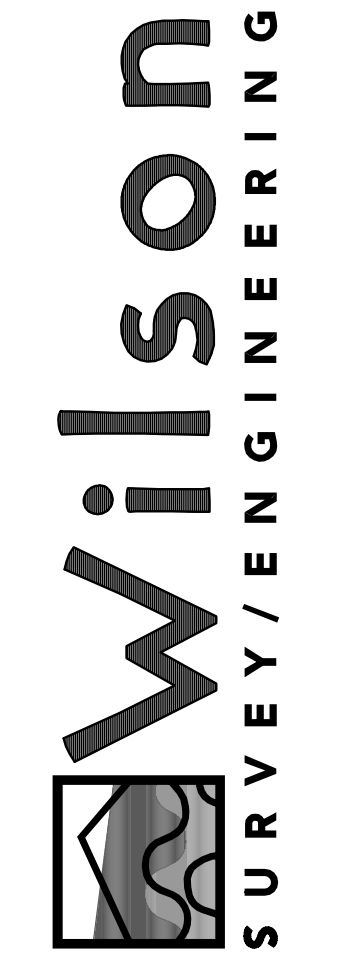
STORMWATER TREATMENT CELL INFORMATION				
CELL #	LENGTH	START STA	END STA	6" PERF INV
CELL 1 W	25'	1+40	1+65	19.35
CELL 2 W	25'	1+65	1+90	20.55
CELL 3 W	25'	1+90	2+15	21.75
CELL 4 W	25'	2+15	2+40	22.95
CELL 5 W	45'	2+40	2+85	24.05
CELL 6 W	80'	2+85	3+65	25.60
CELL 1 E	25'	1+40	1+65	19.05
CELL 2 E	25'	1+65	1+90	20.40
CELL 3 E	25'	1+90	2+15	21.75
CELL 4 E	25'	2+15	2+40	23.10
CELL 5 E	45'	2+40	2+85	24.55
CELL 6 E	85'	2+85	3+65	26.35



E TYPICAL TREATMENT CELL
NOT TO SCALE



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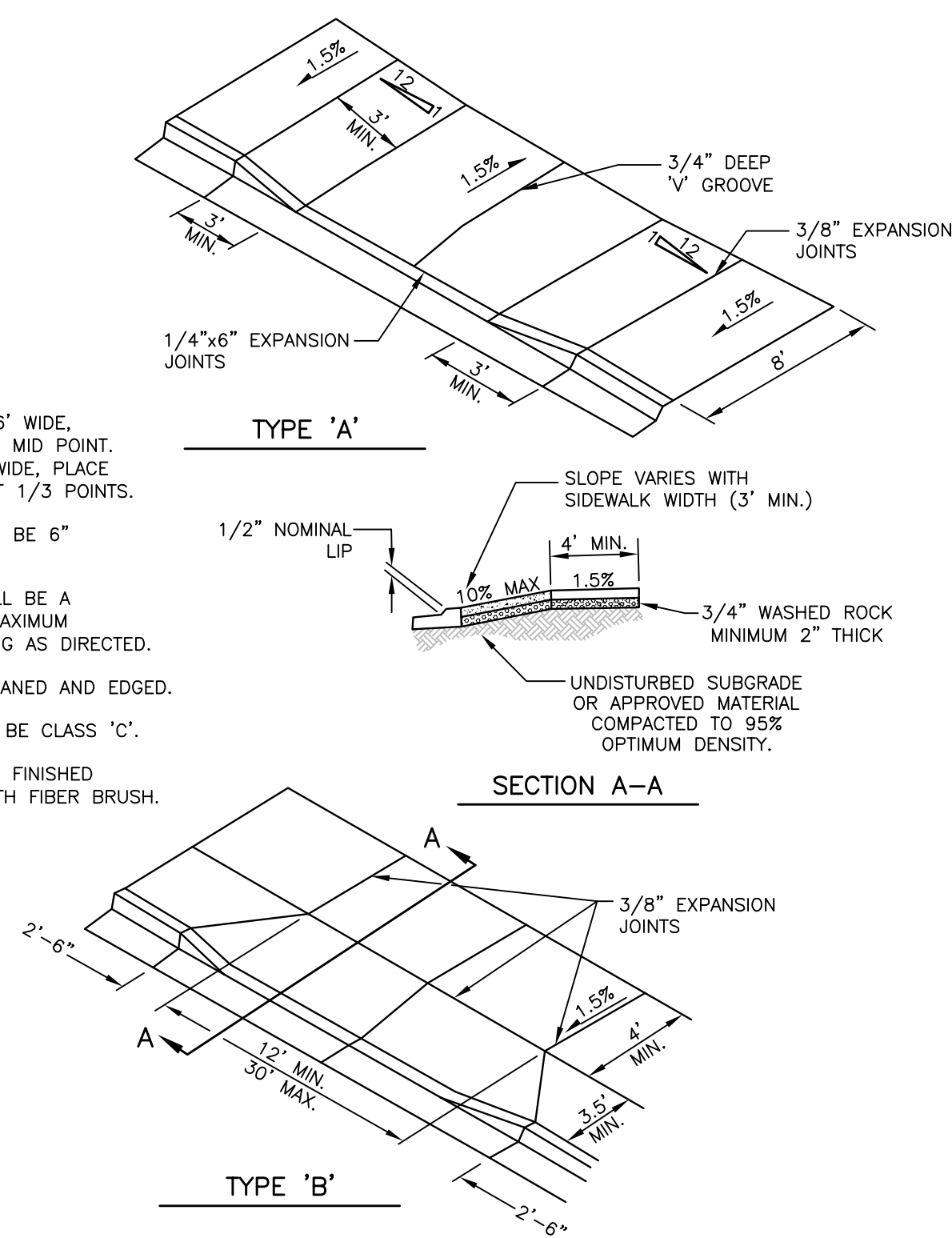
DESIGNED BY MFM
DRAWN BY JGS
CHECKED BY

CITY OF FERNDALE, WA
WASHINGTON
FERNDALE
THIRD AVENUE STORMWATER IMPROVEMENTS
CIVIL DETAILS

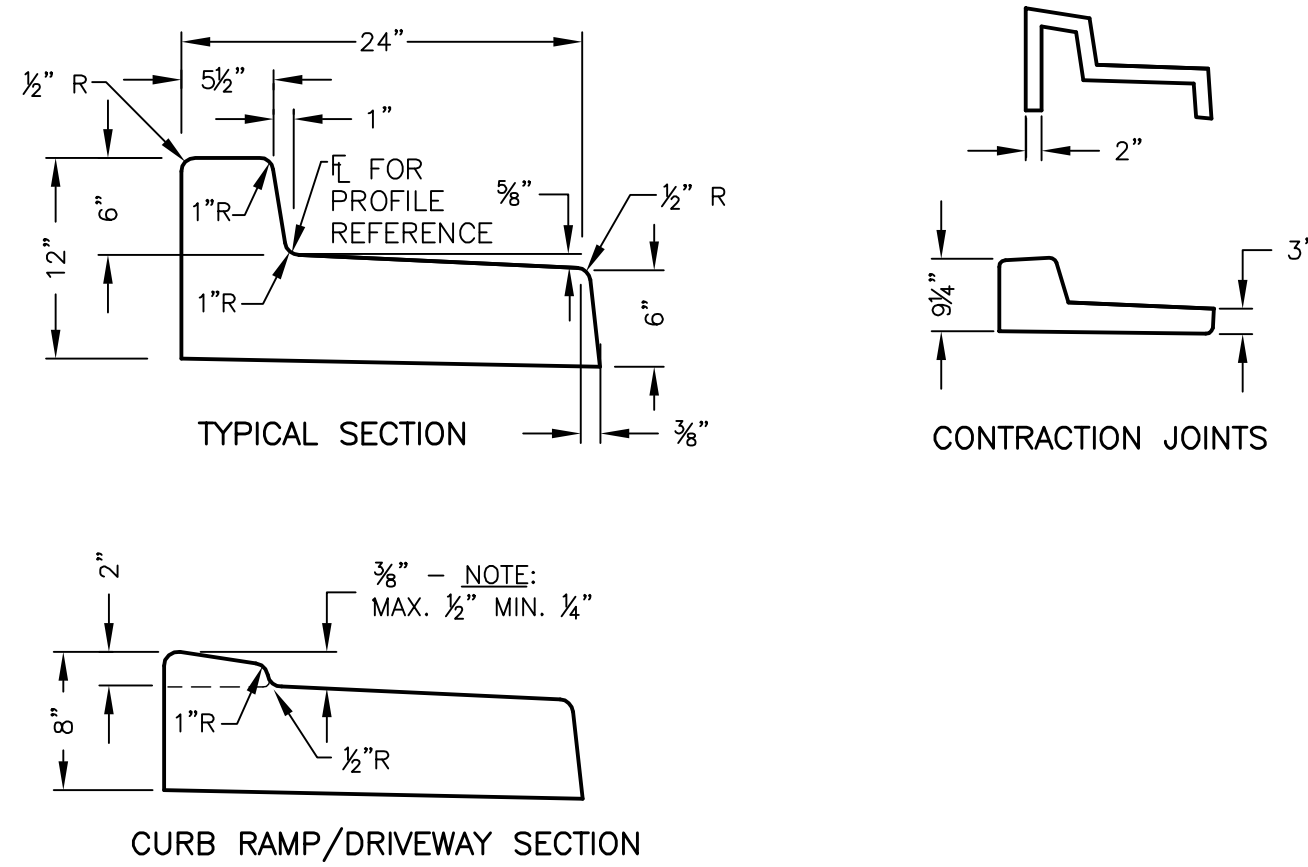
FOR CONSTRUCTION SHEET
DATE 4-10-2017
SCALE AS SHOWN
JOB NUMBER 2014-014
SHEET C5.1 OF 17

GENERAL NOTES:

- 1) FOR DRIVEWAYS 12'-16' WIDE, PLACE 3/4" V GROOVE AT MID POINT. FOR DRIVEWAYS 17'-30' WIDE, PLACE 3/4" DEEP V GROOVE AT 1/3 POINTS.
- 2) DRIVEWAY SECTIONS TO BE 6" THICK MINIMUM.
- 3) DRIVEWAY WIDTHS SHALL BE A MINIMUM OF 12' AND A MAXIMUM OF 30' OR MATCH EXISTING AS DIRECTED.
- 4) ALL JOINTS TO BE CLEANED AND EDGED.
- 5) CEMENT CONCRETE TO BE CLASS 'C'.
- 6) SECTION TO BE BRUSH FINISHED (PARALLEL TO STREET) WITH FIBER BRUSH.



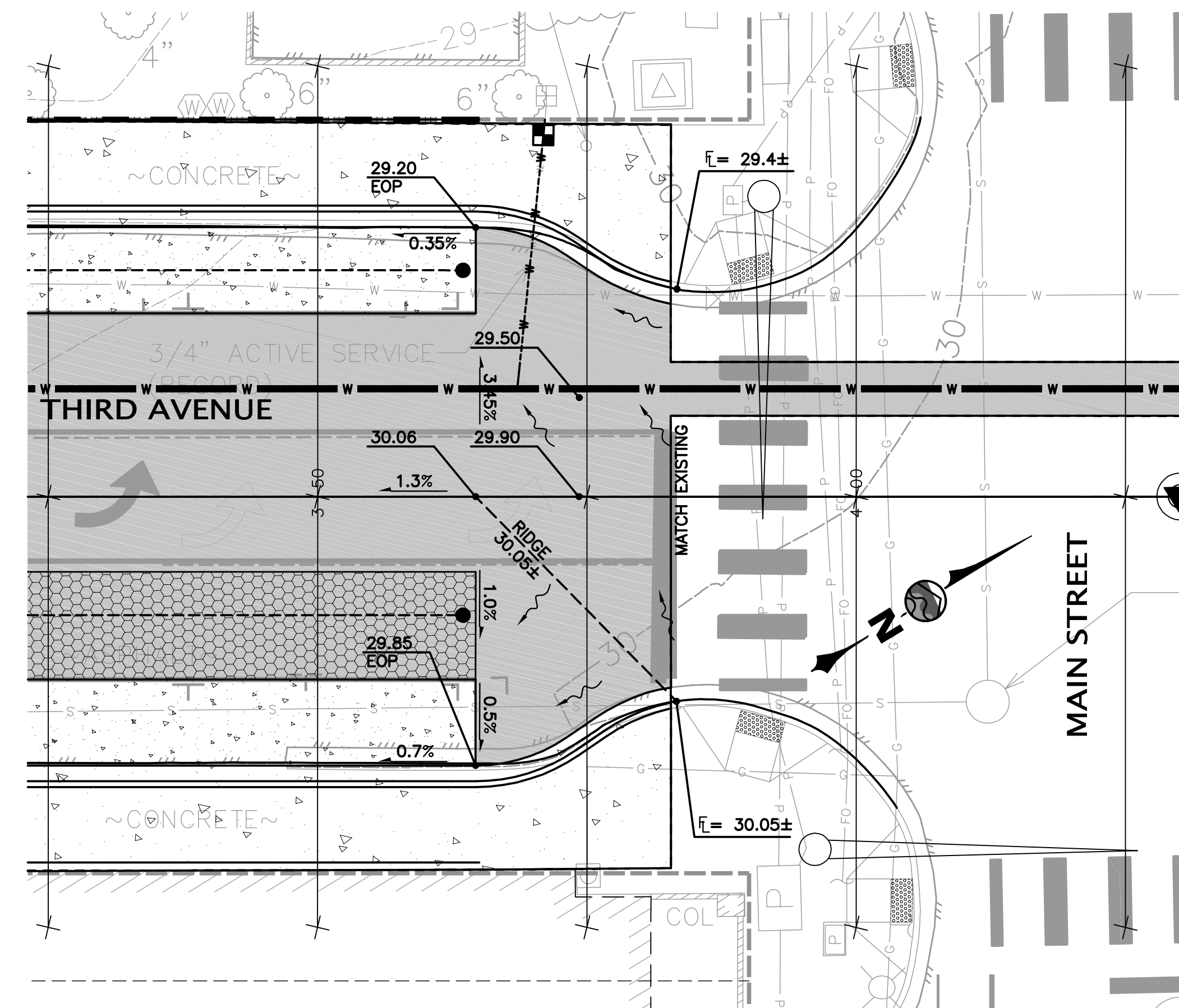
A DRIVEWAY SECTIONS
NOT TO SCALE



GENERAL NOTES:

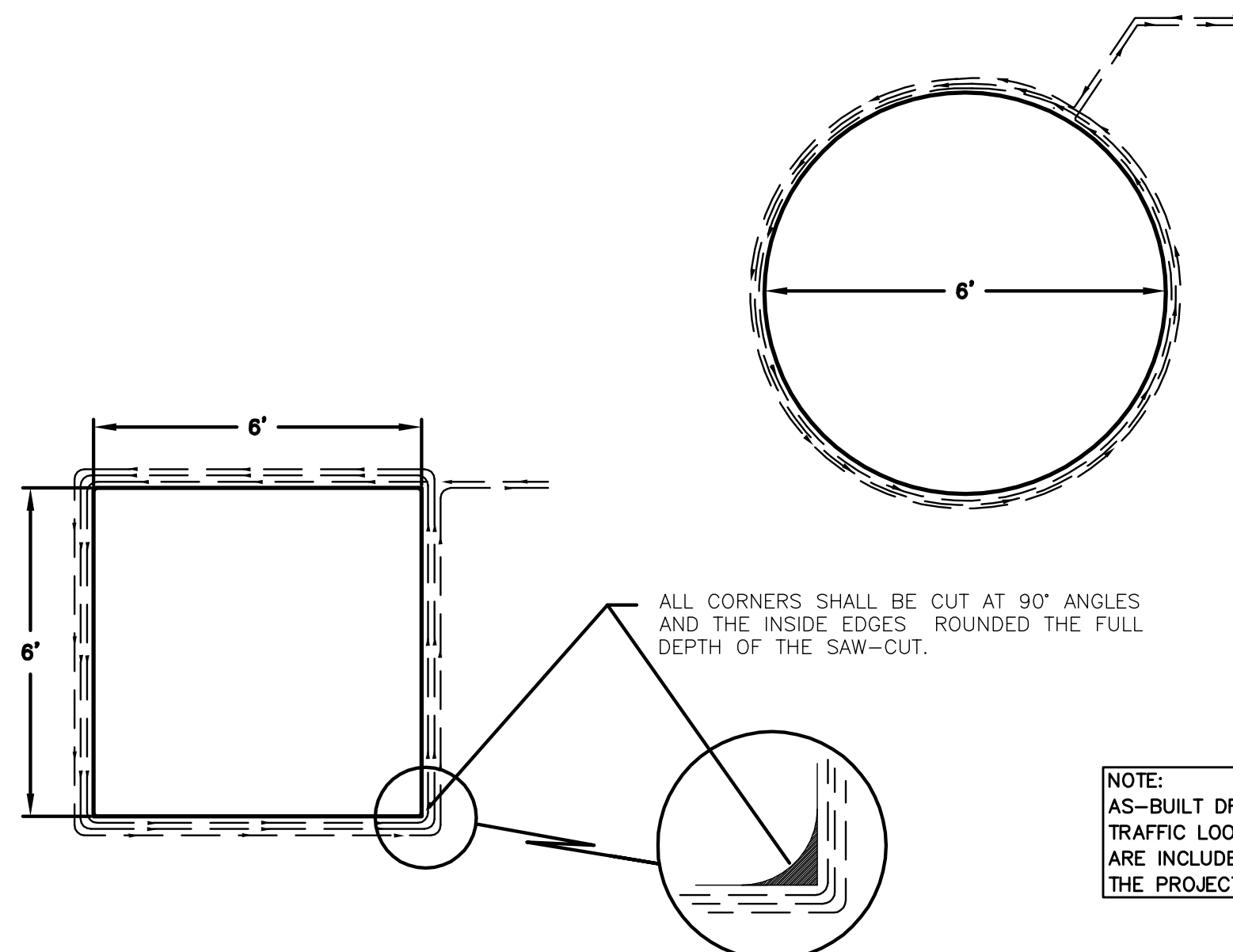
1. CONTRACTION JOINTS OF ONE OF THE TYPES SHOWN ABOVE TO BE PLACED 10' C/C. JOINTS MUST COMPLETELY SEVER THE STRUCTURE TO THE POINTS SHOWN. JOINTS MAY BE MADE BY INSERTING MIN. 3/16" BITUMINOUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EDGED.
2. ALL RADI LESS THAN 100' SHALL USE FLEXIBLE WOOD OR METAL FORMS TO ELIMINATE ANGULAR POINTS AT 10' SECTION POINTS.
3. 2" WEEP HOLES TO BE PLACED ON EACH SIDE OF DRIVEWAY SECTION & A MAX. 60' C/C IN CUT SECTIONS WHERE SIDEWALK DRAIN NOT REQUIRED BY CITY ENGINEER.
4. 3/4" EXPANSION JOINTS TO BE PLACED AT DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS, & COLD JOINTS OR A MAX. OF 80' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF GUTTER.
5. CONCRETE SHALL BE CEMENT CONCRETE "CLASS C".
6. FINISHED WORK SHALL NOT VARY MORE THAN 1/8" IN GRADE AND 1/4" IN ALIGNMENT WHEN CHECKED WITH A 10' STRAIGHT EDGE.
7. EXPOSED SURFACES SHALL BE BRUSHED WITH A FIBER HAIR BRUSH.
8. WHITE PIGMENTED OR TRANSPARENT CURING COMPOUND SHALL BE APPLIED AS OUTLINED IN THE STANDARD SPECIFICATIONS.
9. FURTHER REQUIREMENTS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

B INVERTED CURB & GUTTER
NOT TO SCALE



C INTERSECTION GRADING DETAIL
SCALE HORIZONTAL SCALE FEET

THE TYPE 2 OR ADVANCE INDUCTION LOOPS ARE 6 FEET BY 6 FEET SQUARE OR A 6 FOOT DIAMETER CIRCLE. ALL DETECTOR WIRES ARE INSTALLED IN ONE DIRECTION AROUND THE LOOP. LEAD-IN FROM LOOP TO J-BOX SHALL BE TWISTED AT LEAST TWO TURNS PER FOOT. WIRE SHALL BE #12 USE. LEAD IN SHALL BE INSTALLED THROUGH A 1 1/4" CONDUIT, WITH SWEEP, FROM J-BOX PAST FACE OF CURB.

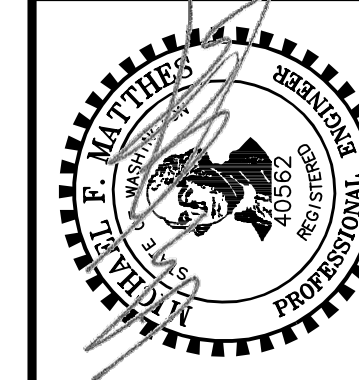


TYPE 2 INDUCTION LOOP MINIMUM OF THREE TURNS

D TRAFFIC LOOP DETAIL
NOT TO SCALE

WILSON ENGINEERING, LLC
805 DUPONT STREET
BELLINGHAM, WA 98225
(360) 733-6100 • FAX (360) 647-9061
www.wilsonengineering.com

Wilson
SURVEY/ENGINEERING



DESIGNED BY MEM
DRAWN BY JGS
CHECKED BY

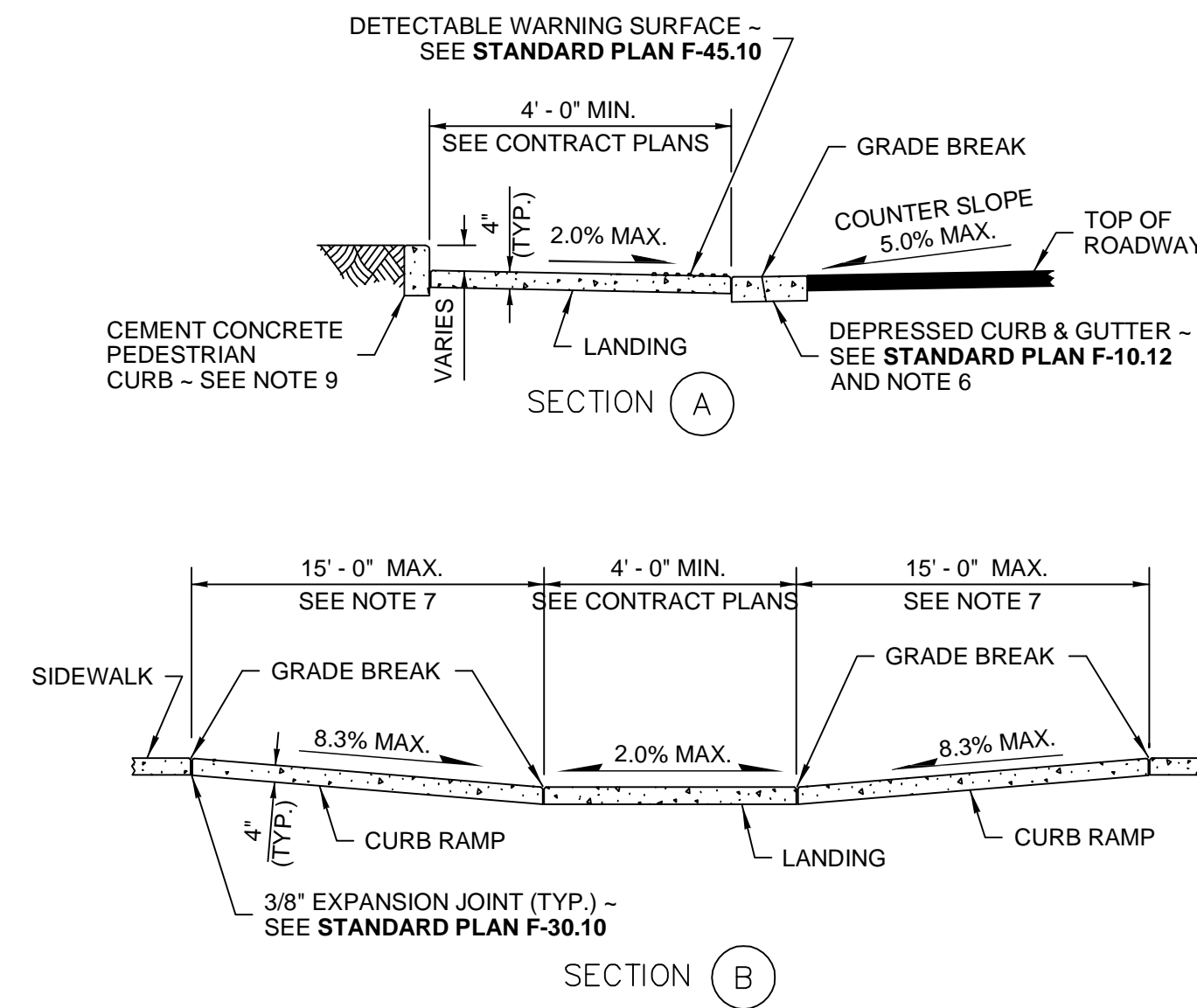
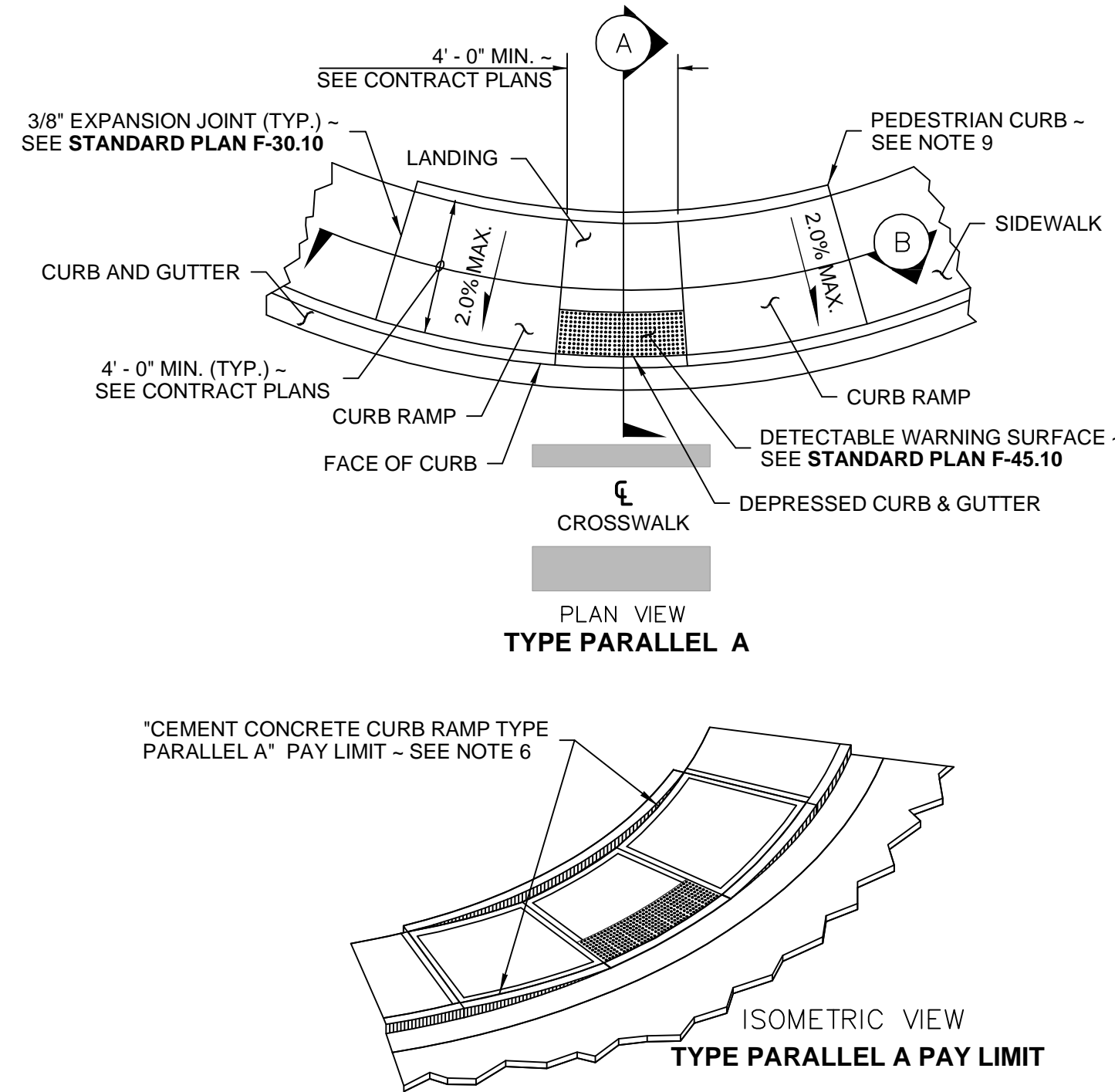
CITY OF FERNDALE, WA
WASHINGTON
FERNDALE
THIRD AVENUE STORMWATER IMPROVEMENTS
CIVIL DETAILS

FOR CONSTRUCTION

DATE 4-10-2017
SCALE AS SHOWN
JOB NUMBER 2014-014

C5.3 OF 17



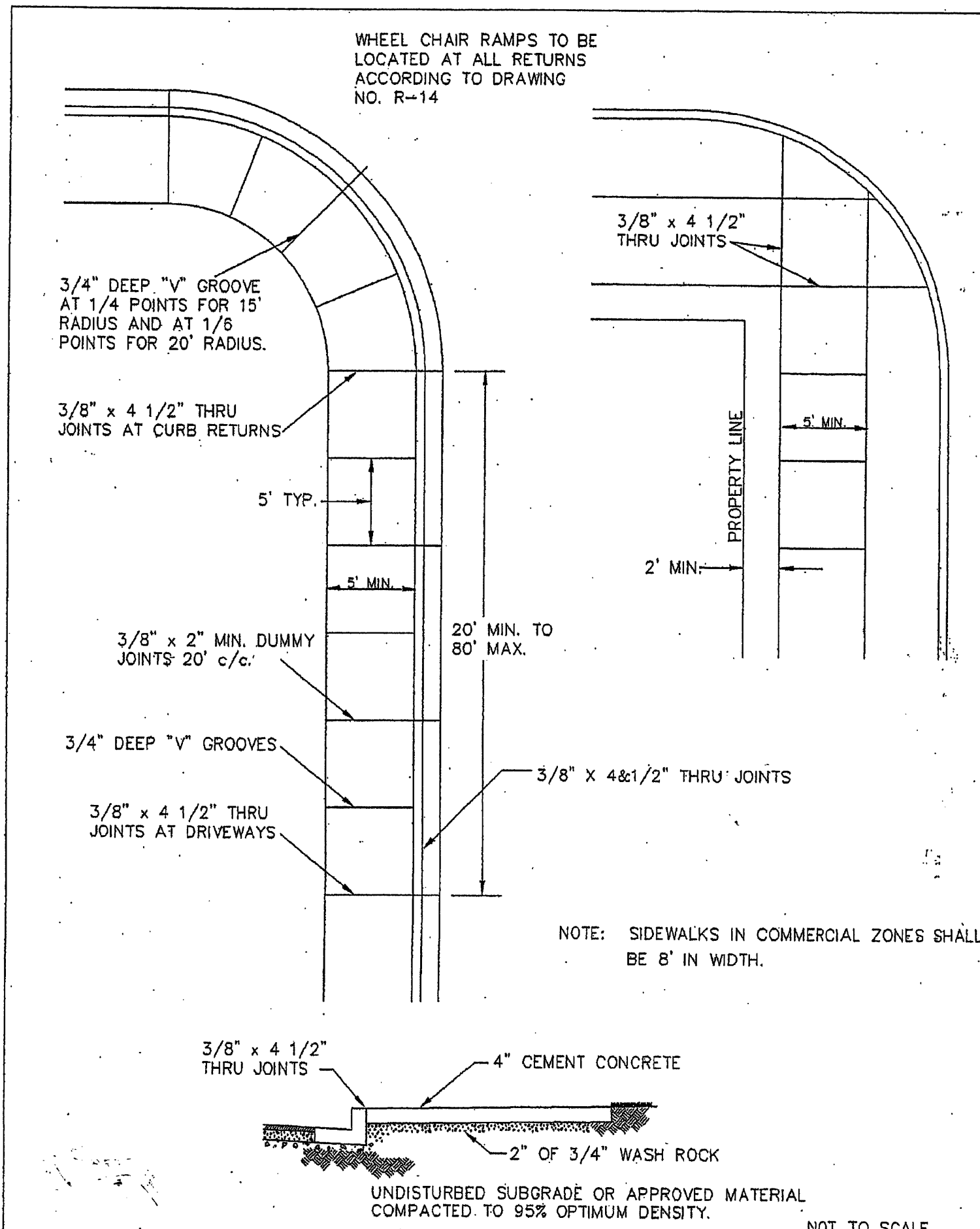


BASED ON WSDOT STANDARD PLAN F-40.12-02

PARALLEL CURB RAMP
NOT TO SCALE

NOTES

1. Provide a separate Curb Ramp for each marked or unmarked crosswalk. Curb Ramp location shall be placed within the width of the associated crosswalk, or as shown in the Contract Plans.
2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances in front of the Curb Ramp or on any part of the Curb Ramp or Landing.
4. See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
5. See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
6. The Bid Item "Cement Concrete Curb Ramp Type ___" does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
7. The Curb Ramp maximum running slope shall not require the ramp length to exceed 15 feet to avoid chasing the slope indefinitely when connecting to steep grades. When applying the 15-foot max. length, the running slope of the curb ramp shall be as flat as feasible.
8. Curb Ramp, Landing, and Flares shall receive broom finish. See **Standard Specifications 8-14**.
9. Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will be no material to retain.

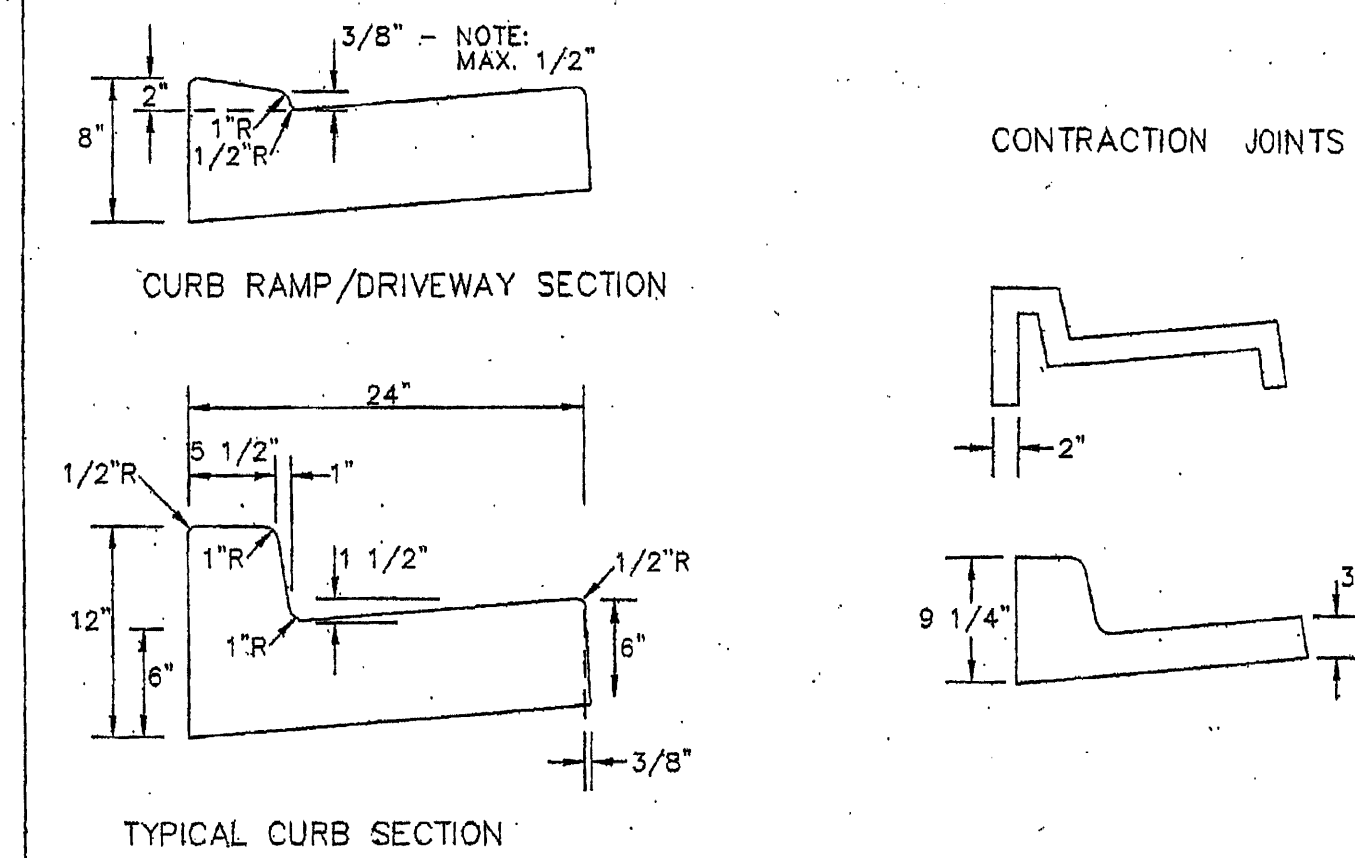


APPROVED: *John F. Elzy* Public Works Director Date

CITY OF FERDALE
TYPICAL SIDEWALK PLAN AND CROSS SECTION

DRAWING R-12

JUNE 1995 2091RD2A/R-12



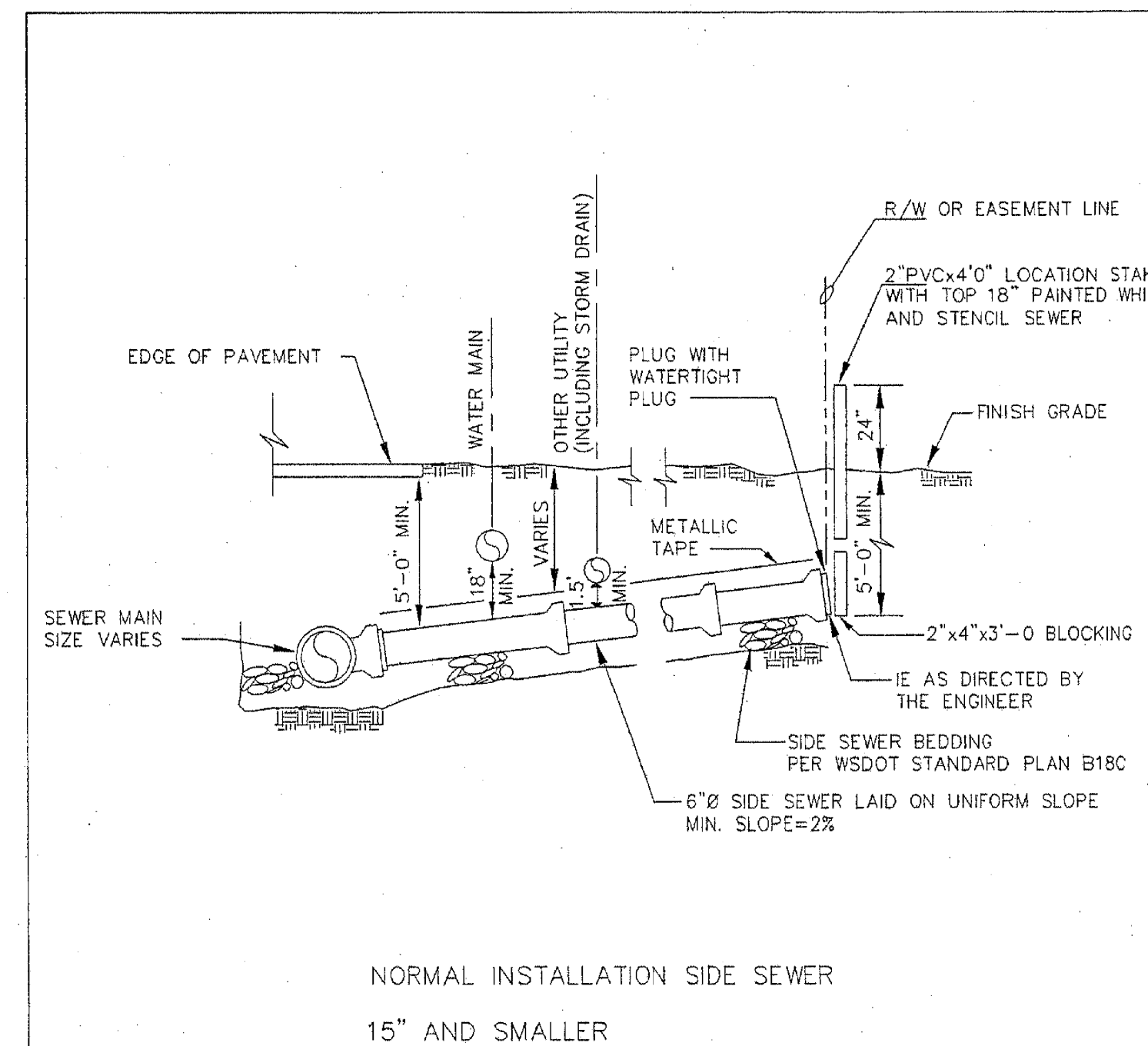
- GENERAL NOTES:
- CONTRACTION JOINTS OF ONE OF THE TYPES SHOWN ABOVE TO BE PLACED 10' C/C. JOINTS MUST COMPLETELY SEVER THE STRUCTURE TO THE POINTS SHOWN. JOINTS MAY BE MADE BY INSERTING MINIMUM 3/16" BITUMINOUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EDGED.
- 2" WEEP HOLES TO BE PLACED ON EACH SIDE OF DRIVEWAY SECTION AND A MAXIMUM 60' C/C IN CUT SECTIONS WHERE SIDEWALK DRAIN NOT REQUIRED BY CITY PUBLIC WORKS DIRECTOR.
- 3/4" EXPANSION JOINTS TO BE PLACED AT DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS AND COLD JOINTS OR A MAXIMUM OF 80' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF GUTTER.
- CONCRETE SHALL BE CEMENT CONCRETE CLASS 3000.
- FINISHED WORK SHALL NOT VARY MORE THAN 1/8" IN GRADE AND 1/4" IN ALIGNMENT WHEN CHECKED WITH 10" STRAIGHT EDGE.
- EXPOSED SURFACES SHALL BE BRUSHED WITH A FIBER BRUSH.
- WHITE PIGMENTED OR TRANSPARENT CURING COMPOUND SHALL BE APPLIED AS OUTLINED IN THE STANDARD SPECIFICATIONS.
- FURTHER REQUIREMENTS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.
- NOT TO SCALE

APPROVED: *John F. Elzy* Public Works Director Date

CITY OF FERDALE
CURB AND GUTTER

DRAWING R-9

JUNE 1995 2091RD2A/R-9



APPROVED: *John F. Elzy* Public Works Director Date

CITY OF FERDALE
NORMAL INSTALLATION
15" AND SMALLER SEWER MAINS

DRAWING SS-6

JUNE 1995 2091SE3A/SS-6



FOR CONSTRUCTION SHEET

DATE 4-10-2017

SCALE C5.4

AS SHOWN

OF 17

JOB NUMBER 2014-014

CITY OF FERDALE, WA

WASHINGTON

THIRD AVENUE STORMWATER IMPROVEMENTS

CIVIL DETAILS



DESIGNED BY MFM
DRAWN BY JGS
CHECKED BY

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