

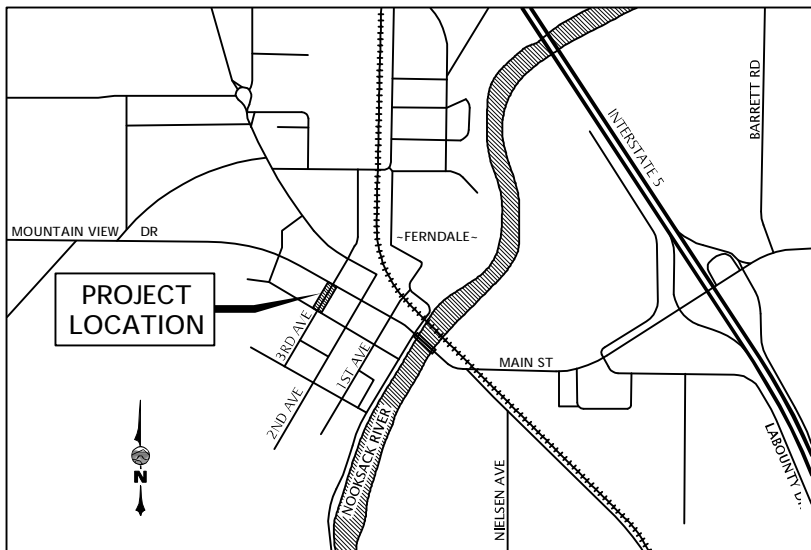
CITY OF FERNDALE, WASHINGTON

THIRD AVENUE STORMWATER IMPROVEMENTS

CITY PROJECT NO. ST2014-02

FUNDED IN PART BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

VICINITY MAP - NOT TO SCALE



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GENERAL NOTES

- 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.
- 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.
- 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.
- 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 INDICATED WILL BE THE UTILITIES AND UNDERGROUND FACILITIES ENCOUNTERED.
- 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.
- 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.
- 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.
- 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.
- REPLACE ALL FENCES, PAVEMENT STRIPING, SIGNAGE, AND OTHER SURFACE FEATURES AFFECTED BY CONSTRUCTION IN KIND.
- CONTRACTOR SHALL COMPLY WITH CONDITIONS OF TEMPORARY CONSTRUCTION EASEMENTS TO BE SECURED BY THE CITY.
- 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.
- CONTRACTOR SHALL COMPLY WITH THE PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS (IDP) FOR THIS PROJECT, WHICH IS INCLUDED IN THE PROJECT SPECIFICATIONS.
- 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:

- 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 (COFDS) 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.
- 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.
- THE CONTRACTOR MUST HAVE A FULL SET OF CITY CONTRACT DOCUMENTS ON THE SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- CONSTRUCTION NOISE SHALL BE LIMITED TO BETWEEN 7 a.m. TO 8 p.m. MONDAY THROUGH SATURDAY, UNLESS PRE-APPROVED BY CITY.
- 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.
- 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.
- 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 ONSITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
- SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT.
- THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDALE AND/OR WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- 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.
- 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:
 - PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
 - CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES.
 - 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.
 - 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.
 - GRADING OF PUBLIC OR PRIVATE ROADWAY AT:
 - COMPLETION OF EXCAVATION TO SUBGRADE.
 - COMPLETION OF BALLAST COURSE PLACEMENT
 - COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT
 - POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
 - ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
 - OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
 - END OF MAINTENANCE PERIOD
- 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 CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. 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.
- 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.
- 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

- 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.
- THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
 - NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
 - WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
 - TRENCH DEWATERING DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.
 - WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
- UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS.
- ALL UTILITY TRENCHES IN THE RIGHT OF WAY SHALL BE BACKFILLED IN ACCORDANCE WITH THESE PLANS.
- TESTING OF NEW WATER LINES, SEWER AND DRAIN SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.
- 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 COMPACTION.
- 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.
- 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

- 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.
- THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
- 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.
- THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.

BASE COURSES & CRUSHED SURFACING

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

STORM DRAINAGE

- 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
- STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP), ALL OTHER STORM SEWER PIPE SHALL BE SDR 35 PVC.
- ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
- 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.
- 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.
- AT THE END OF ALL 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

- 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)

- 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.
- 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.
 - 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.
 - 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.
 - 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.
 - 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 DISINFECTION 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.
 - BACKFILL SHALL BE GRAVEL BASE, CLASS B, IN ALL STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% OPTIMUM DENSITY. IN UNIMPROVED AREAS, MINIMUM COMPACTION SHALL BE 90% OF OPTIMUM DENSITY.
 - ALL PIPES SHALL HAVE A MINIMUM COVER OF 42".
 - 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 10 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.
 - WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE DETAIL A SHEET C5.1.
 - FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COFSD SO W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:
 - FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY VALVED 2-1/2" PORTS AND ONE 5-1/2" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND AIRCRAFT CABLE SHALL BE SUPPLIED. HYDRANTS SHALL BE EITHER IOWA OR M.H. 9291 HYDRANTS.
 - 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.
 - 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.
 - 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.
 - FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY OPERABLE BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

ROAD

- 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.
- 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.
- THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER A REPORT FROM A QUALIFIED GEOTECHNICAL FIRM CERTIFYING THE COMPACTION OF THE GRAVEL BASE UNDER ALL PAVING AREAS.
- 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.
- 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).
- CEMENT CONCRETE SHALL BE CLASS 3000 (WITH AIR ENTRAINMENT) IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 6-02.3(2)B.
- 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.
- 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.
- CEMENT CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLANS OR AS DESIGNED BY THE ENGINEER, IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS, SECTION 8-04 AND CITY OF FERNDALE STANDARDS, DRAWING R-8 AND R-9. HANDICAP RAMPS SHALL BE CONSTRUCTED PER WSDOT STANDARD PLANS F-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.
- PAVEMENT:
 - SOIL RESIDUAL HERBICIDE SHALL BE APPLIED WITHIN 24 HOURS OF PAVING.
 - A TACK COAT OF ASPHALT SHALL BE PLACED BETWEEN ALL COURSES OF ASPHALT.
 - A TACK PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-400W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT. WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL PROVIDE A SHOULDER A MINIMUM 2-FOOT WIDE PETROTEC PAVING FABRIC, OR EQUIVALENT, OVER JOINT BETWEEN PAVING LIFTS.
- 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.
- TRENCH EXCAVATIONS, BEDDING AND PIPE FOR STORMWATER PIPE LAYING SHALL BE IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-08.
- STORM SEWER PIPE CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 7-04. MATERIAL SHALL BE HANCO 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)
- PERFORATED UNDERDRAIN PIPE SHALL MEET THE WSDOT STANDARD SPECIFICATION 7-01.3(2) .

SANITARY SEWER SYSTEMS

- 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.
- ALL WORK MUST BE INSPECTED 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.
- 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.
- 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 A MINIMUM DENSITY OF 95% MODIFIED PROCTOR. USE OF SUITABLE NATIVE BACKFILL OUTSIDE OF TRAVELED WAY SHALL BE SUBJECT TO APPROVAL BY THE CITY.
- 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.
- ALL SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDALE STANDARD DETAIL SS-6.
- CONTRACTOR SHALL EXTEND SEWER STUBS 5 FT BEYOND UTILITY CORRIDOR OR 15 FEET BEYOND RIGHT-OF-WAY LINE.
- EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATERTIGHT 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.
- ALL ACTIVITIES WHICH WILL INTERRUPT SERVICE SHALL OCCUR BETWEEN THE HOURS OF 11PM AND 6AM OR BE PRE-APPROVED BY CITY.



NO. _____ REVISIONS _____ BY _____ DATE _____

DESIGNED BY _____ MEM _____ DRAWN BY _____ JCS/RDN _____ CHECKED BY _____

CITY OF FERNDALE, WA

WASHINGTON

FERNDALE

THIRD AVENUE STORMWATER IMPROVEMENTS

COVER SHEET

FOR CONSTRUCTION

SHEET _____ DATE 4-10-2017 SCALE C0.1 OF 17

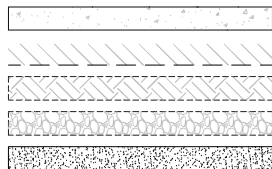
JOB NUMBER 2014-014

WILSON ENGINEERING, LLC
805 DUPONT STREET
BELLINGHAM, WA 98225
(360) 733-6100 • FAX (360) 647-9661
www.wilsonengineering.com

Wilson SURVEY/ENGINEERING

LEGEND & ABBREVIATIONS- SIZE & SCALE MAY VARY

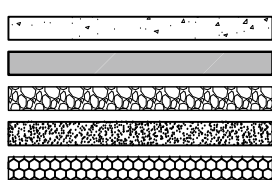
EXISTING HATCH PATTERNS



DESCRIPTION

EXIST. CONCRETE
EXIST. BUILDING
EXIST. EARTH
EXIST. GRAVEL
EXIST. SAND

PROPOSED HATCH PATTERNS

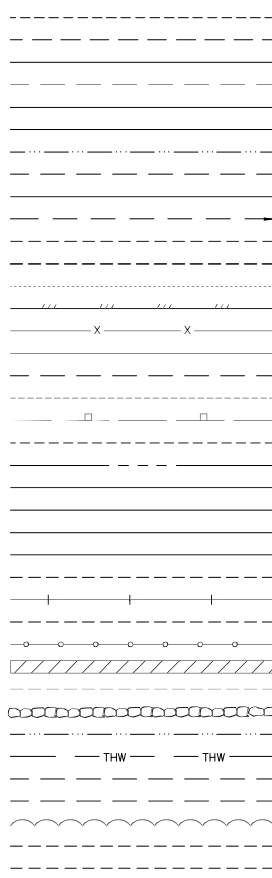


DESCRIPTION

PROP. CONCRETE
PROP. TOP COURSE GRAVEL
PROP. GRAVEL
PROP. SAND
PROP. QUARRY SPALLS

SURFACE FEATURES

EXISTING PLAN LINETYPES

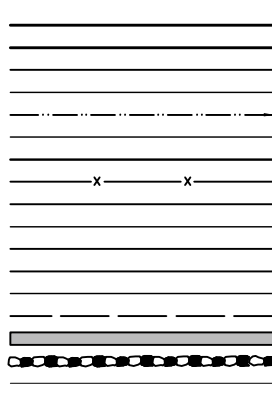


DESCRIPTION

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
THALWAG LINE
TOP OF BANK/SLOPE
TOE OF BANK/SLOPE
VEGETATION/SHRUB LINE
WETLAND/SWAMP PERIMETER
WETLAND BUFFER

SURFACE FEATURES

PROPOSED PLAN LINETYPES

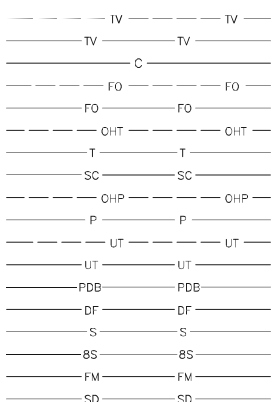


DESCRIPTION

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

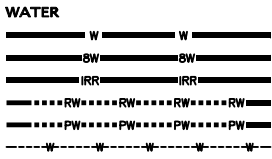
EXISTING PLAN LINETYPES



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
GAS TANK/STRUCTURE
OIL
AIR LINE
BURIED UTILITY APPROX. EXTENTS
MISC UTILITY (BURIED)

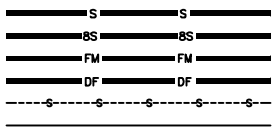
PROPOSED PLAN UTILITY LINETYPES



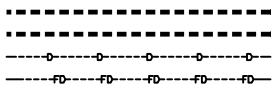
DESCRIPTION

WATER (Ø WIDTH)
8" WATER (Ø WIDTH)
IRRIGATION (Ø WIDTH)
RECLAIMED WATER (Ø WIDTH)
POTABLE WATER (Ø WIDTH)
WATER SERVICE
WATER STRUCTURE
SEWER (Ø WIDTH)
8" SEWER (Ø WIDTH)
FORCE MAIN (Ø WIDTH)
DRAIN FIELD
SEWER SERVICE
SEWER STRUCTURE
STORM DRAIN (Ø WIDTH)
CULVERT (Ø WIDTH)
STORM SERVICE
FOOTING DRAIN
STORM STRUCTURE
GRADE BREAK
SLOPE ARROWS
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

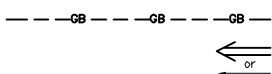
SANITARY SEWER



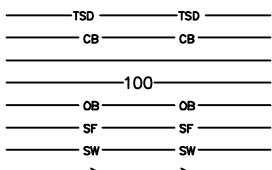
STORM DRAIN



GRADING



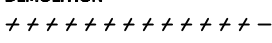
EROSION CONTROL



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

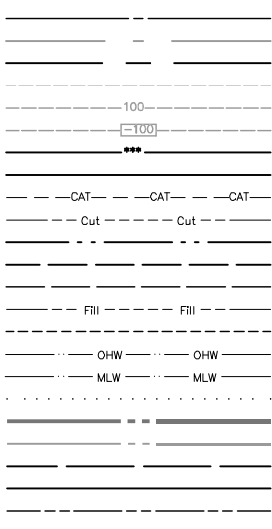
DEMOLITION



DESCRIPTION

UNDERGROUND UTILITY TO BE REMOVED

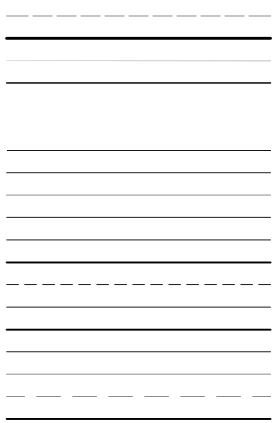
SURVEY PLAN LINETYPES



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 USED)
RIGHT-OF-WAY (PROPOSED)
RIGHT-OF-WAY (EX. RECORD) (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)

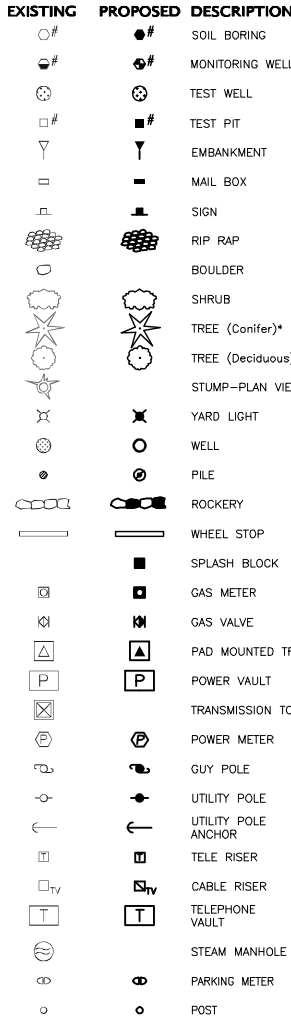
PROFILE LINETYPES



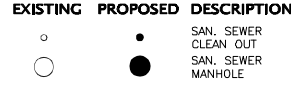
DESCRIPTION

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)

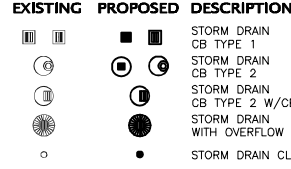
MISC. SYMBOLS



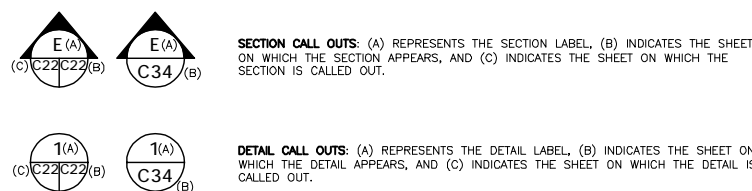
SANITARY SEWER SYMBOLS



STORM DRAIN SYMBOLS



SECTION/DETAIL CALL-OUTS



SECTION CALL OUTS: (A) REPRESENTS THE SECTION LABEL, (B) INDICATES THE SHEET ON WHICH THE SECTION APPEARS, AND (C) INDICATES THE SHEET ON WHICH THE SECTION IS CALLED OUT.

DETAIL CALL OUTS: (A) REPRESENTS THE DETAIL LABEL, (B) INDICATES THE SHEET ON WHICH THE DETAIL APPEARS, AND (C) INDICATES THE SHEET ON WHICH THE DETAIL IS CALLED OUT.

SYMBOLS
° = DEGREES
± = PLUS/MINUS
φ = DIAMETER
Δ = DELTA
C/L = CENTERLINE
F/L = FLOWLINE
P/L = PROPERTY LINE

SPOT ELEVATIONS
1 = ELEVATION
2 = DESCRIPTION- SEE DEFINED ABBREVIATIONS ABOVE

DIRECTIONAL ABBREVIATIONS
N = NORTH
NE = NORTHEAST
E = EAST
SE = SOUTHEAST
S = SOUTH
SW = SOUTHWEST
W = WEST
NW = NORTHWEST

ABBREVIATIONS

AL = ALIGNMENT
ANC = UTILITY POLE ANCHOR
APPROX = APPROXIMATE
ASPH or AC = ASPHALT
ASSY = ASSEMBLY
ASTM = AMERICAN SOCIETY FOR TESTING & MATERIALS
BLDG = BUILDING
BMP = BEST MANAGEMENT PRACTICE
BVCS = BEGIN VERTICAL CURVE STATION
BVCE = BEGIN VERTICAL CURVE ELEVATION
CB = CATCH BASIN
CK = CHECK VALVE
C/L, C = CENTERLINE
CESCL = CERTIFIED EROSION SEDIMENT CONTROL LEAD
COL = COLUMN
CMP = CORRUGATED METAL PIPE
C.O. = CLEAN OUT
CONC. C = CONCRETE
COR = CORNER
CPP = CORRUGATED POLYETHYLENE PIPE
CSTO = CRUSHED SURFACING TOP COURSE
DDCA = DOUBLE DETECTOR CHECK VALVE ASSEMBLY
DF = DRAIN FIELD
DI = DUCTILE IRON
DO = DISSOLVED OXYGEN
DR = DIAMETER RATIO
DS = DOWNSPOUT
EB = EXPLORATION BORING
EFFL = EFFLUENT
EG = EXISTING GRADE
ELEV. EL = ELEVATION
EOG = EDGE OF GRAVEL
EOP = EDGE OF PAVEMENT
EP = EXPLORATION PIT
EXIST. EX = EXISTING
EVCS = END VERTICAL CURVE STATION
EVC = END VERTICAL CURVE ELEVATION
FDC = FIRE DEPARTMENT CONNECTION
FF = FINISH FLOOR
FG = FINISH GRADE
FL = FLOWLINE OR FLANGE (CONNECTION)
F/L = FLOWLINE
E = FLOWLINE OF CURB
FNC = FENCE
GB = GRADE BREAK
GNET = GAS METER
GP = GUY POLE
GPM = GALLONS PER MINUTE
GRVL, G = GRAVEL
GUTT = GUTTER
GV = GATE VALVE
HB = HOSE BIB
HDG = HOT-DIP GALVANIZED
HDPE = HIGH DENSITY POLYETHYLENE
HV = HORIZONTAL-VERTICAL
HWL = HIGH WATER LEVEL
HYD = HYDRANT
IE = INVERT ELEVATION
INV = INVERT
LF = LINEAR FEET
LUM = LUMINAIRE
LT = LEFT
MAX = MAXIMUM
MB = MAIL BOX
MBR = MEMBRANE BIO-REACTOR
MC = MAINTENANCE CLEANING
MFEM = MEMBRANE FILTRATION EQUIPMENT MANUFACTURER
MFR = MANUFACTURER
MH = MANHOLE
MIN = MINIMUM
MISC = MISCELLANEOUS
MJ = MECHANICAL JOINT
MJS = MIXED LIQUOR SUSPENDED SOLIDS
MW = MONITORING WELL
NPD = NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
ON CENTER = ON CENTER
O.C. = ON CENTER EACH WAY
O.C.E.W = OUTSIDE DIAMETER
OD = OUTSIDE DIAMETER
OHP = OVERHEAD POWER
OHT = OVERHEAD TELEPHONE
OSHA = OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PC = POINT OF CURVATURE
PCC = POINT OF CONTINUING CURVATURE
PIV = POST INDICATOR VALVE
P/L, P = PROPERTY LINE
PLC = PROGRAMMABLE LOGIC CONTROLLER
PLTR = PLANTER
POL = POINT ON LINE
PROP = PROPOSED
PS = PUMP STATION
PSI = POUNDS PER SQUARE INCH
PT = POINT OF TANGENCY
PVC = POLYVINYL CHLORIDE
PVI = POINT OF VERTICAL INTERSECTION
PW = POTABLE WATER
R = RADIUS
RCK = ROCK/BOULDER
RET = RETAINING
REC = RECORD
REQ'D = REQUIRED
RI = RAPID INFILTRATION
RPBA = REUSE PRESSURE BACKFLOW ASSEMBLY
RR = RAILROAD
RT = RIGHT
R/W or ROW = RIGHT-OF-WAY
RW = REUSE WATER
SCADA = SUPERVISORY CONTROL AND DATA ACQUISITION
SCH = SCHEDULE
SDCB = STORM DRAIN CATCH BASIN
SD = STORM DRAIN
SDMH = STORM DRAIN MANHOLE
SFH = SINGLE FAMILY HOUSING
SH = SHRUB/BUSH
SN = SIGN
SPK = SPIKE
SS = SANITARY SEWER
SSCO = SANITARY SEWER CLEAN-OUT
SSMH = SANITARY SEWER MANHOLE
STA = STATION
STEP = SEPTIC TANK EFFLUENT PUMP
S/W = SIDEWALK
TBC = TOP BACK OF CURB
TBD = TO BE DETERMINED
TBM = TEMPORARY BENCH MARK
T.O.W. = TOP OF WALL
TYP = TYPICAL
UP = UTILITY POLE
VAC = VACATED
VC = VERTICAL CURVE
VCI = VOLATILE CORROSION INHIBITOR
VEG = VEGETATION
VFD = VARIABLE FREQUENCY DRIVE
WAS = WASTE ACTIVATED SLUDGE
WL = WATERLINE
WM = WATER METER
WS = WATER SURFACE
WSDOT = WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WV = WATER VALVE
WWTP = WASTE WATER TREATMENT PLANT
YD = YARD DRAIN
YL = YARD LIGHT

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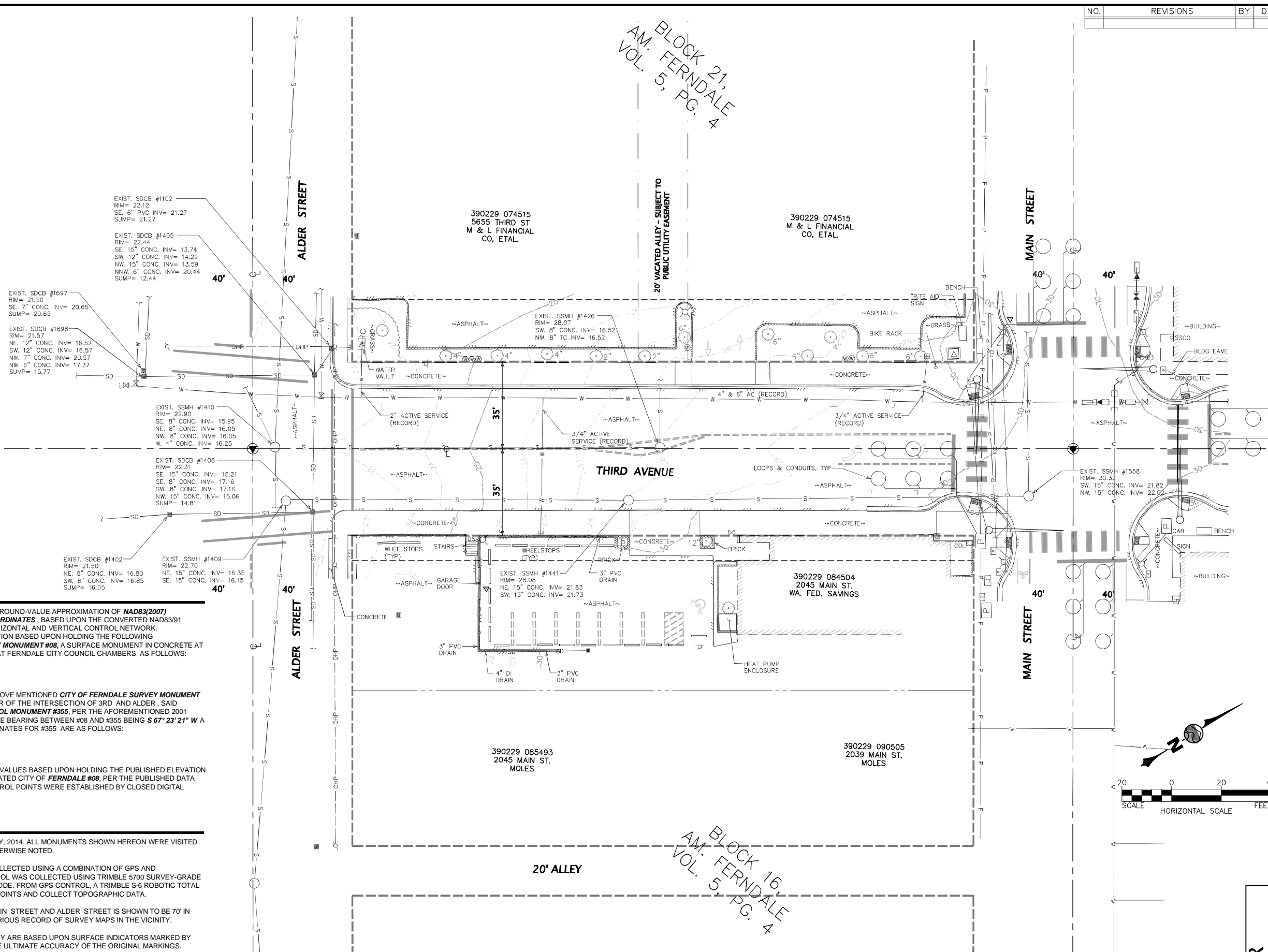


DESIGNED BY MFM
DRAWN BY JCS
CHECKED BY

CITY OF FERNDALE, WA
WASHINGTON
THIRD AVENUE STORMWATER IMPROVEMENTS
LEGEND & ABBREVIATIONS

FOR CONSTRUCTION

SHEET C0.2
DATE 4-10-2017
SCALE AS SHOWN
JOB NUMBER 2014-014



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.



NO. REVISIONS BY DATE

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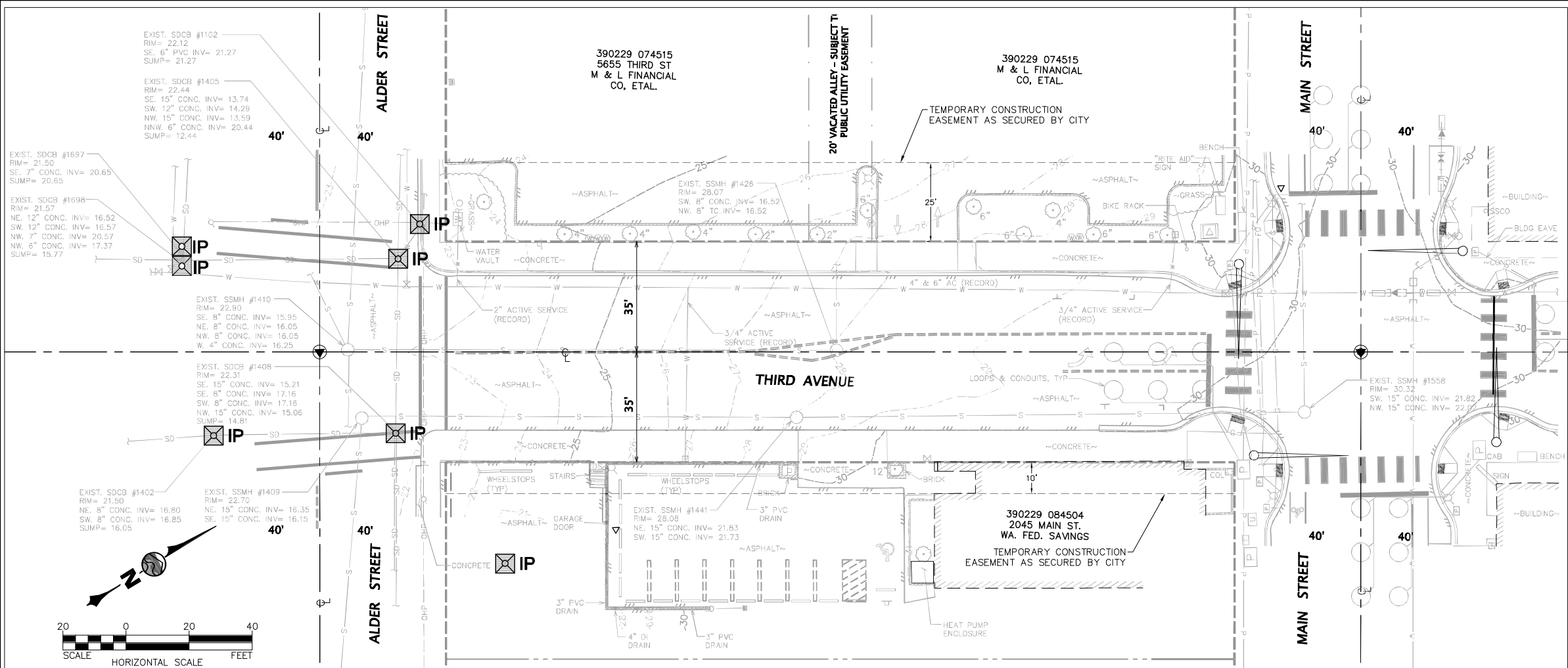
Wilson
SURVEY/ENGINEERING

DESIGNED BY: MEM
DRAWN BY: JCS
CHECKED BY:

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

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

FOR CONSTRUCTION
SHEET: C1.1
OF: 17



TESC PLAN

GENERAL NOTES

- 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".
- 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.
- UNWORKED SOILS: ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY SUITABLE AND TIMELY APPLICATION OF BMPs.
- VEGETATION: EXISTING VEGETATION SHALL BE PRESERVED WHERE ATTAINABLE.
- SLOPES: CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES SHALL BE STABILIZED AS SOON AS POSSIBLE.
- OUTLETS: STABILIZATION ADEQUATE TO PREVENT EROSION OF OUTLETS AND ADJACENT STREAM BANKS SHALL BE PROVIDED AT THE OUTLETS OF ALL CONVEYANCE SYSTEMS.
- INLETS: ALL EXISTING AND PROPOSED STORM DRAIN INLETS SHALL BE PROPERLY MAINTAINED AND PROTECTED FROM SILTATION.
- 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.
- SITE RUNOFF: PRIOR TO FLOWING OFF THE SITE, STORMWATER RUNOFF SHALL PASS THROUGH A SILT FENCE OR EQUAL BMP.
- ADJACENT PROPERTIES: PROPERTIES ADJACENT TO THE PROJECT SHALL BE PROTECTED FROM SEDIMENT DEPOSITION.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 3/4 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 HYDROSEDED 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.)

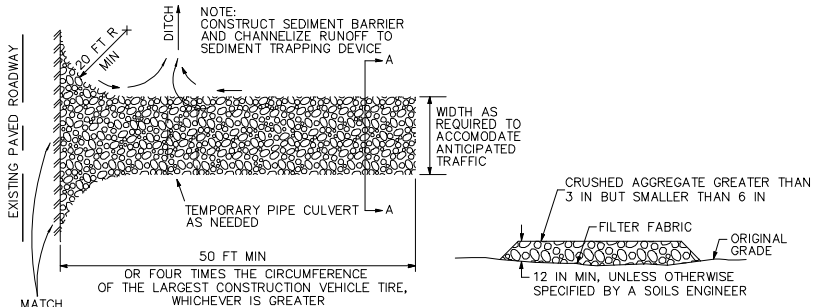
AREA SPECIFIC BMPs

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/UNDISTABILIZED 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

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NO.	REVISIONS	BY	DATE

BMP C233 – SILT (FILTER FABRIC) FENCE

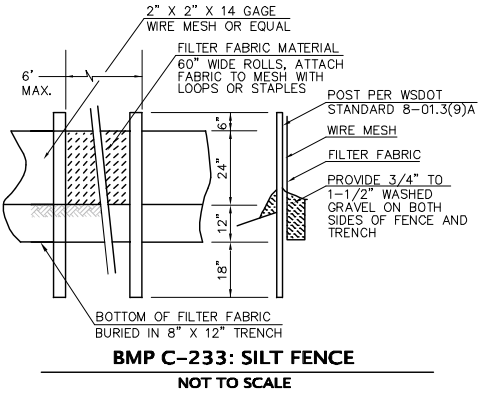
PURPOSE: USE OF A SILT FENCE REDUCES THE TRANSPORT OF COARSE SEDIMENT FROM A CONSTRUCTION SITE BY PROVIDING A TEMPORARY PHYSICAL BARRIER TO SEDIMENT AND REDUCING THE RUNOFF VELOCITIES OF OVERLAND FLOW.

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: POLYMERIC 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.



BMP C-233: SILT FENCE

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NOTES:

- INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
- SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
- 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

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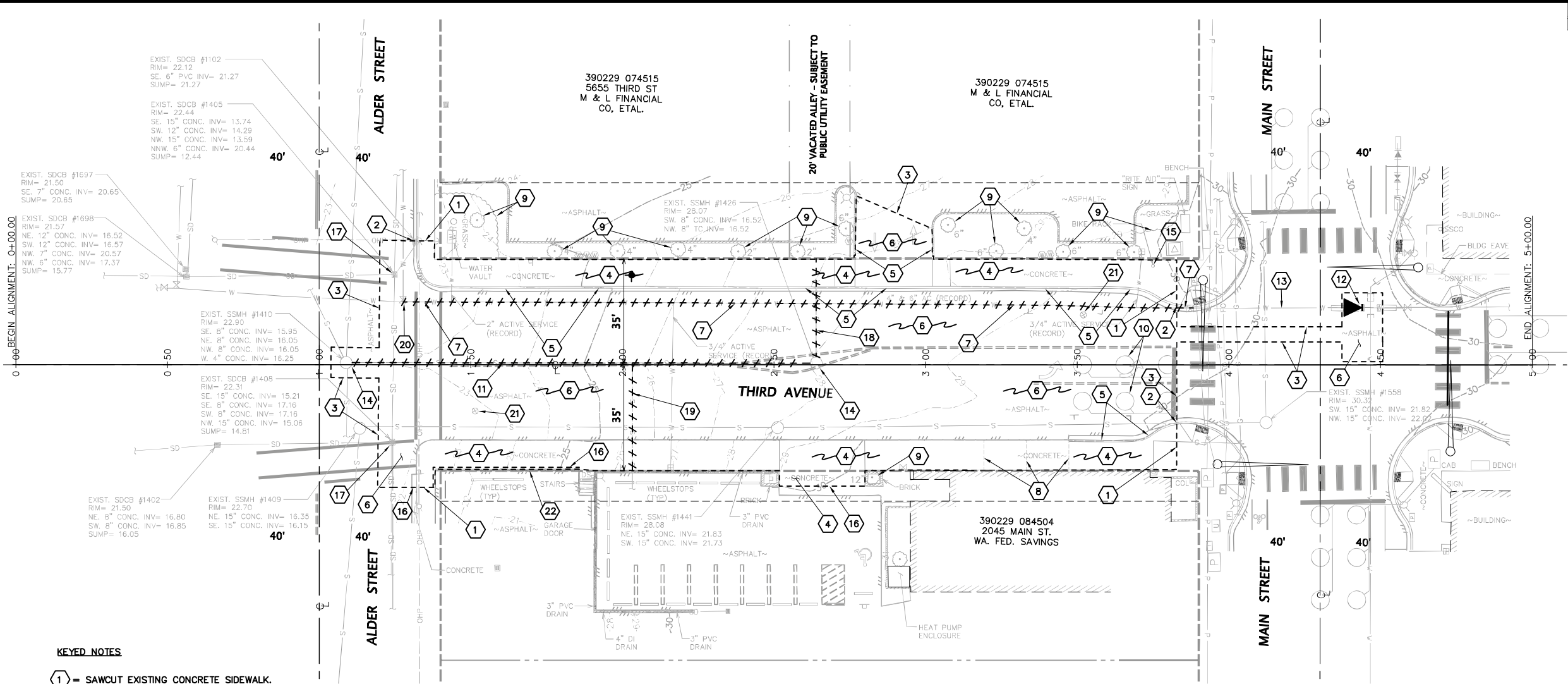
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THIRD AVENUE STORMWATER IMPROVEMENTS
T.E.S.C. PLAN

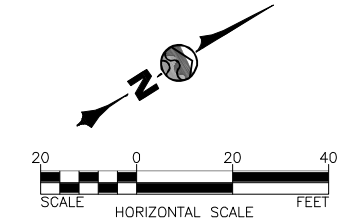
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SHEET	DATE	SCALE	AS SHOWN	JOB NUMBER
C2.1	4-10-2017	OF	17	2014-014





NO.	REVISIONS	BY	DATE



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 PAYING 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:

- 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.
- 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.
- 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.
- 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.
- PROTECT SIDEWALK, SIGNS, CURB AND GUTTER TO REMAIN.
- PROTECT ASPHALT PAVING TO REMAIN, UNLESS OTHERWISE NOTED.
- ALL BACKFILL MATERIAL SHALL BE ONSITE MATERIAL OR IMPORT MATERIAL INSTALLED AND COMPACTED AS APPROVED BY THE CITY.
- CONTRACTOR TO ENSURE ANY SLOPE EXCAVATION DOES NOT INTERFERE WITH IMPROVEMENTS INDICATED TO BE PROTECTED.
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE BUILDING CODE REQUIREMENTS, OSHA, AND ALL APPLICABLE REGULATORY REQUIREMENTS.
- SIDEWALK DEMOLITION TO OCCUR ALONG EXISTING JOINTS IN CONCRETE EXCEPT AS NOTED PER KEYNOTE 1, THIS SHEET.
- ALL TREES AND VEGETATION, PUBLIC & PRIVATE, ARE TO BE PROTECTED FOR THE DURATION OF THE PROJECT.
- 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!
- ALL UTILITY SERVICES SHALL REMAIN UNINTERRUPTED DURING CONSTRUCTION.



FOR
CONSTRUCTION

DATE
4-10-2017

SCALE
C3.1

OF
17

CITY OF FERNDAL, WA

FERNDAL

WASHINGTON

THIRD AVENUE STORMWATER IMPROVEMENTS

DEMOLITION PLAN

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MEM

DRAWN BY
JCS

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two business days
before you dig

NOTES:

- 1) SEE CITY OF FERNDALE NOTES ON COVER SHEET FOR SPECIFIC DIRECTION AND CITY STANDARD DETAILS.
- 2) REPLACE ANY REMOVED TRAFFIC/SIGNAL UNDERGROUND (IN PAVEMENT) FACILITIES IN KIND. COORDINATE WITH CITY OF FERNDALE PUBLIC WORKS.
- 3) WATER & SEWER SERVICE SHALL NOT BE INTERRUPTED DURING BUSINESS HOURS. SEE WATER NOTE #5 AND SEWER NOTE #9, SHEET CO.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 PVIOUS 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 PVIOUS 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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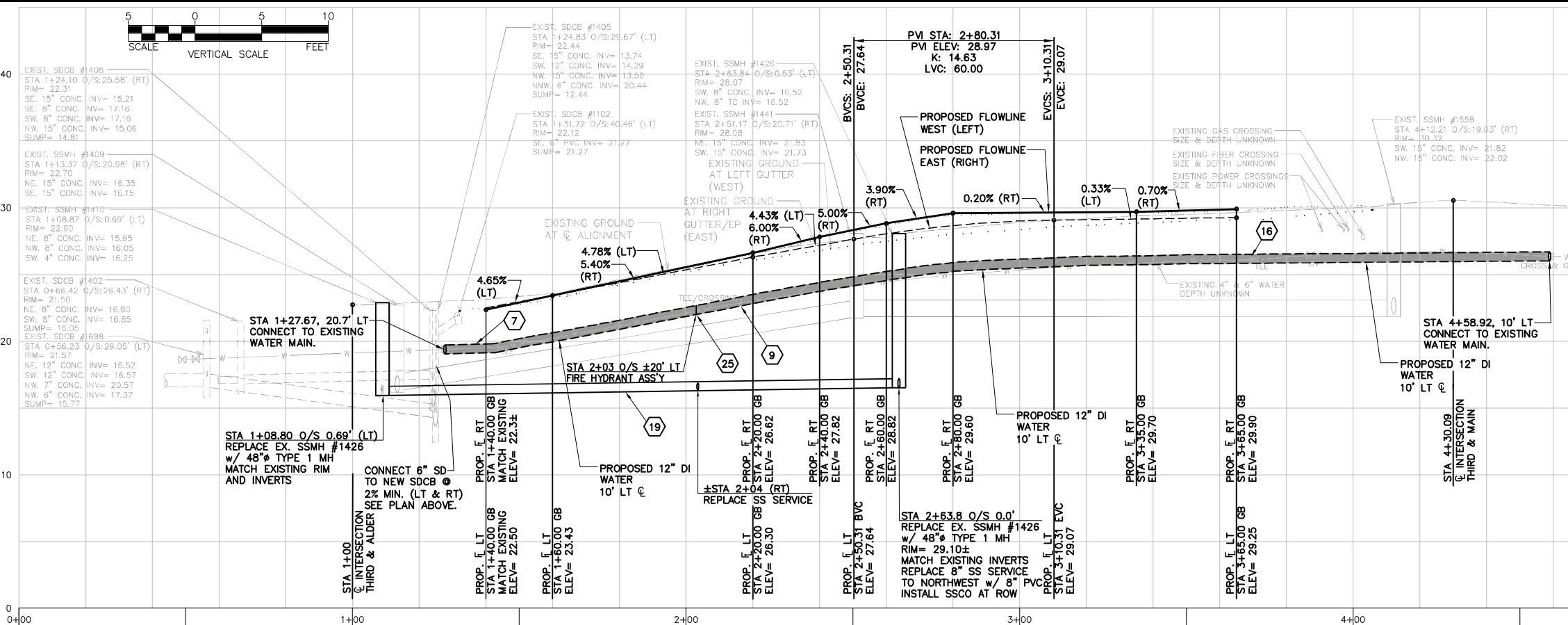
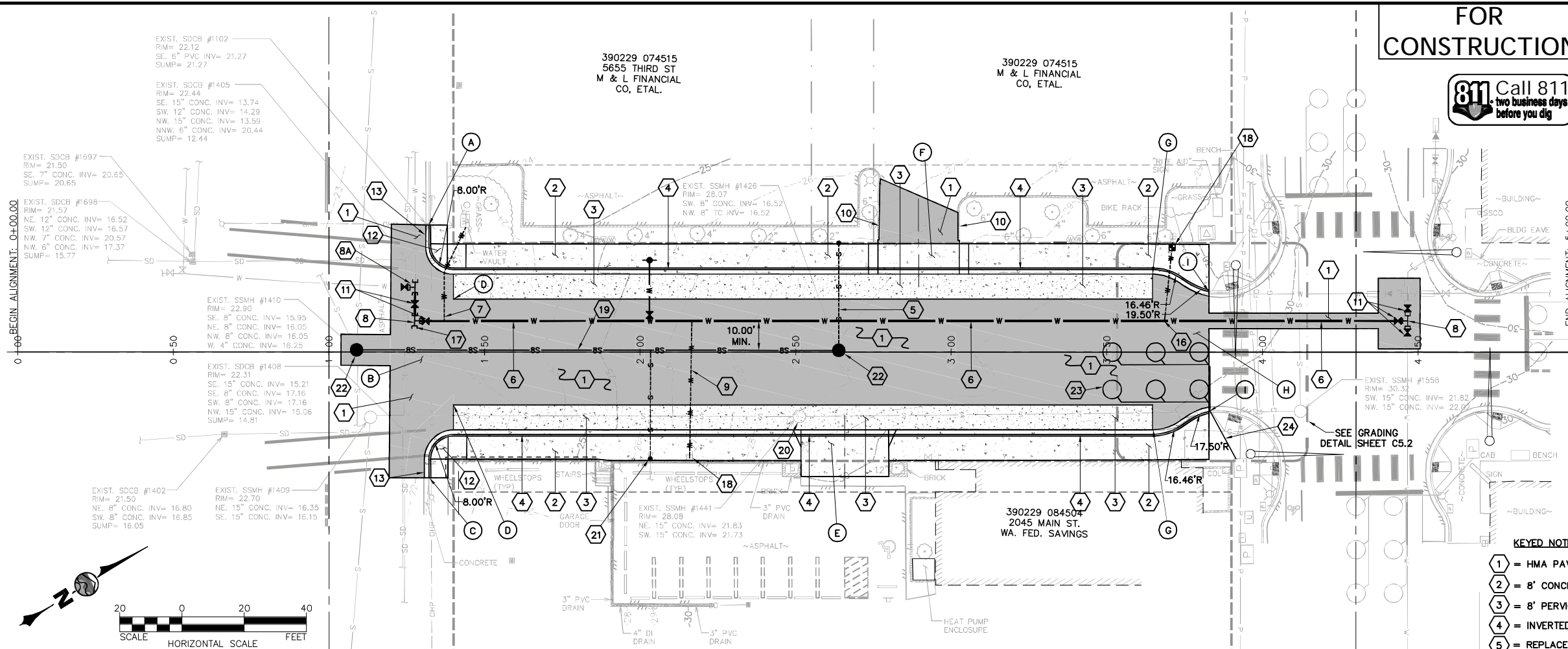
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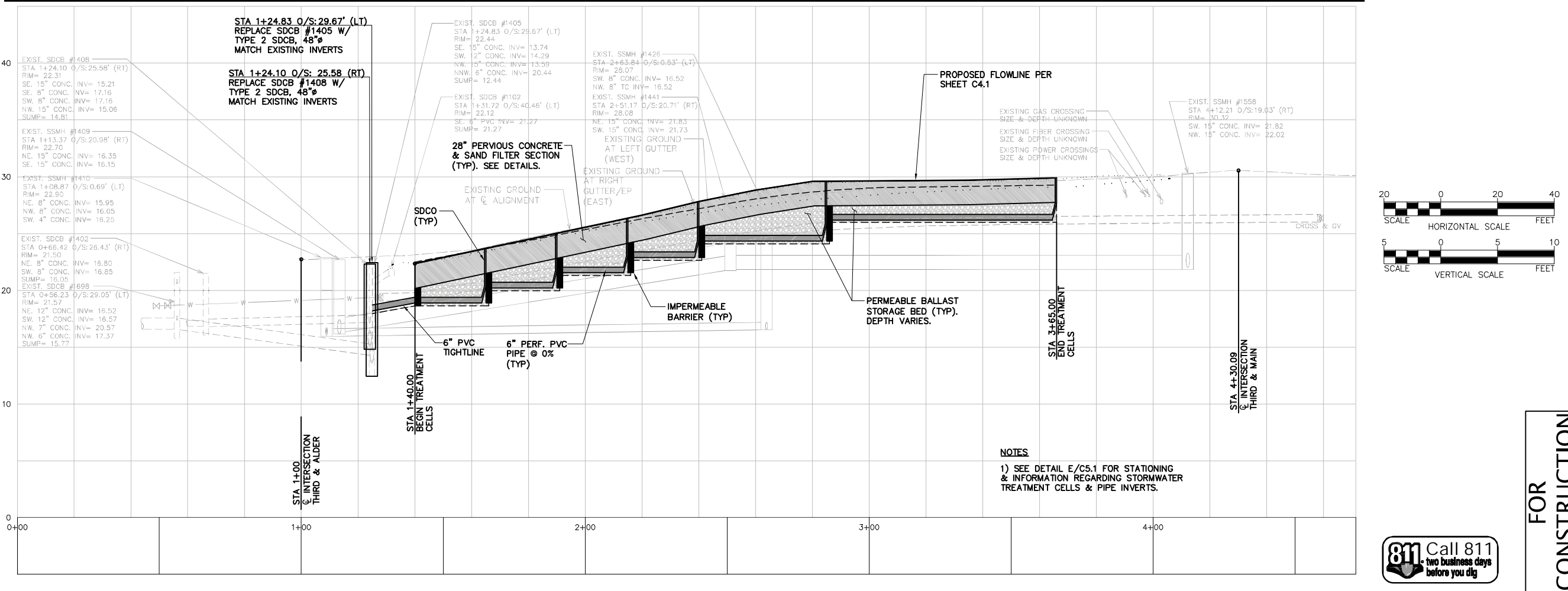
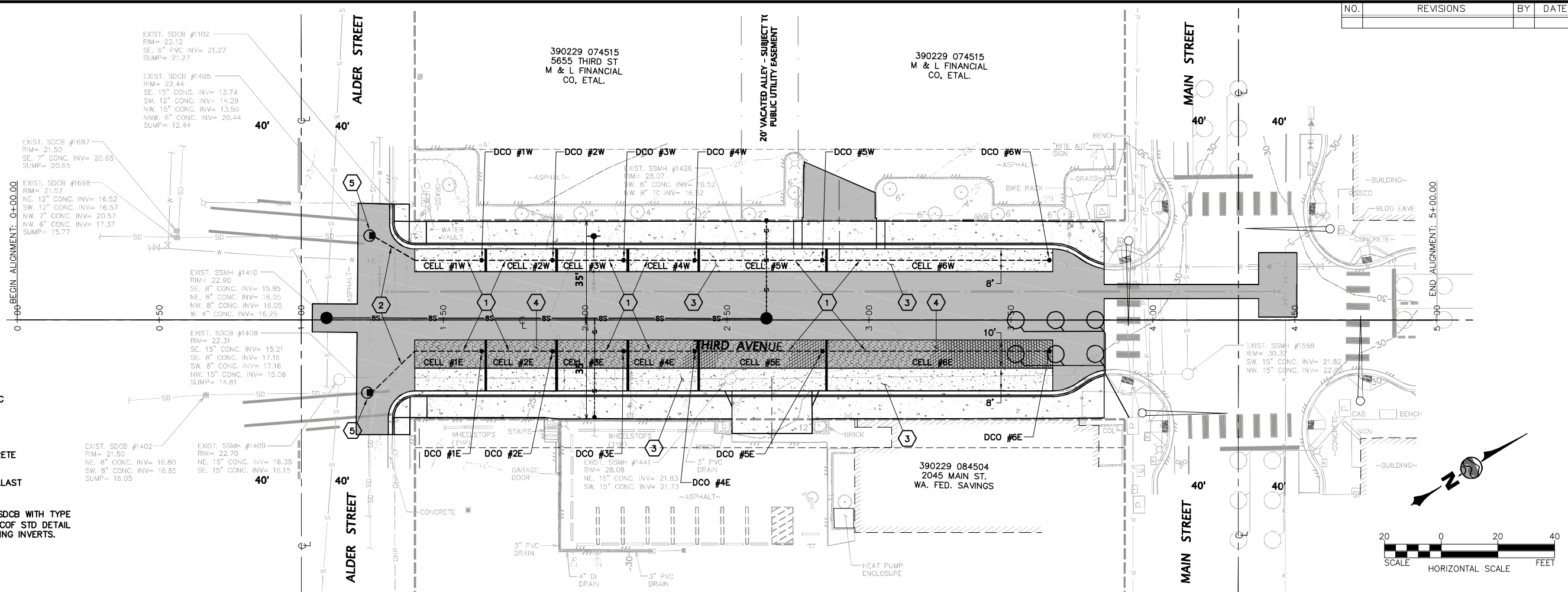


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CITY OF FERNDALE, WA
WASHINGTON
**1000 D AVENUE STORMWATER IMPROVEMENTS
PLAN & PROFILE - ROAD & UTILITIES**

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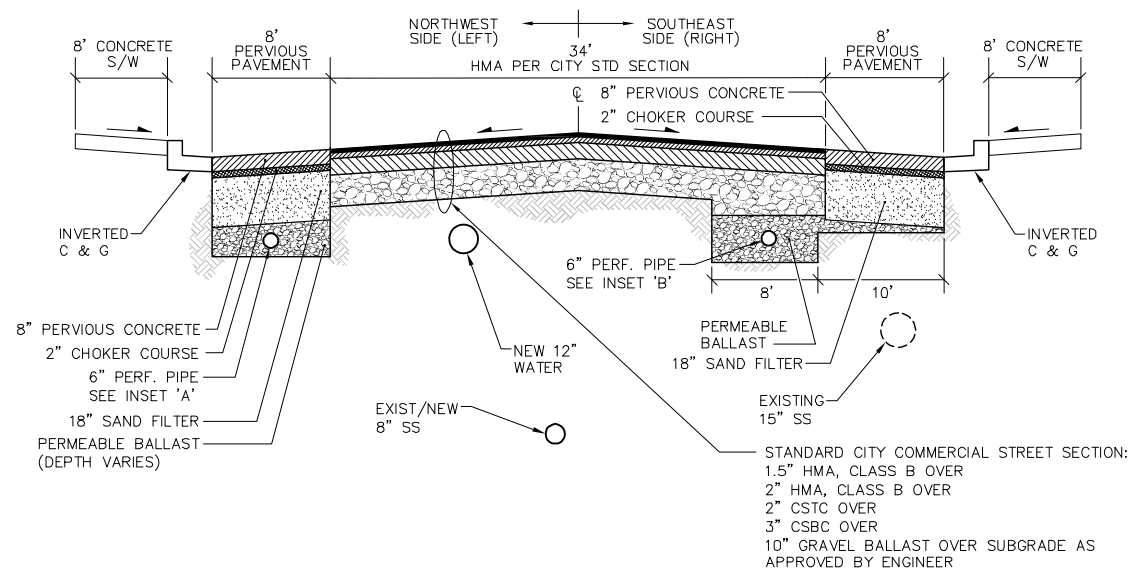
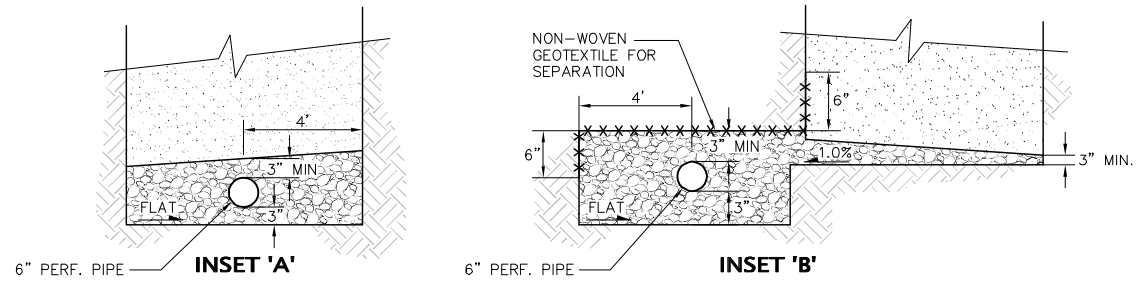
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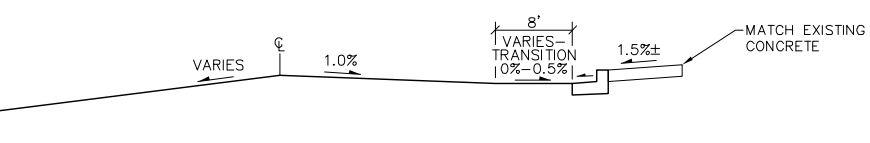
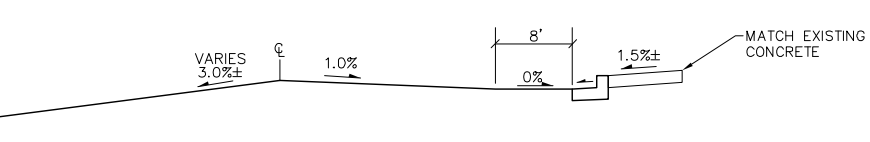
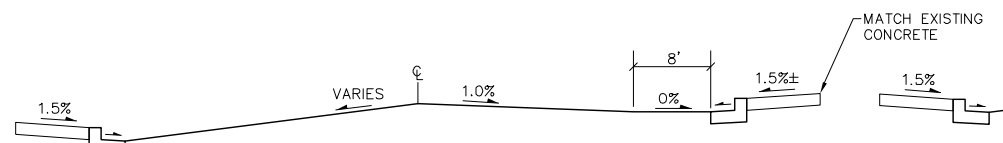
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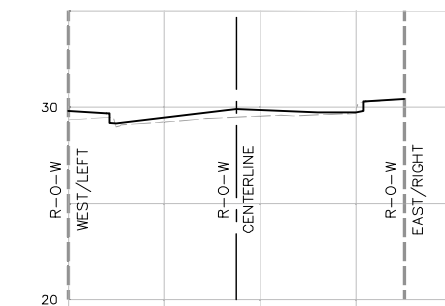
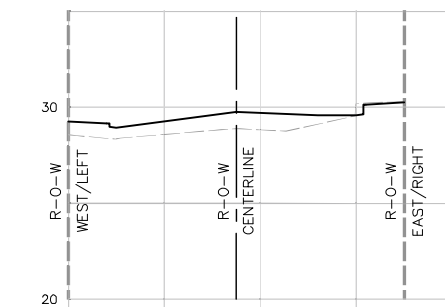
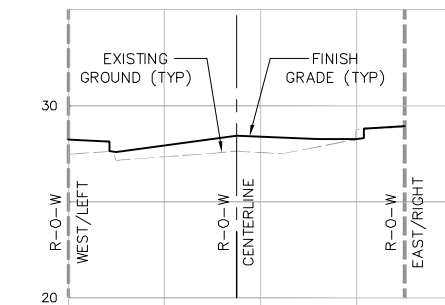
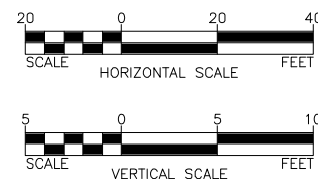
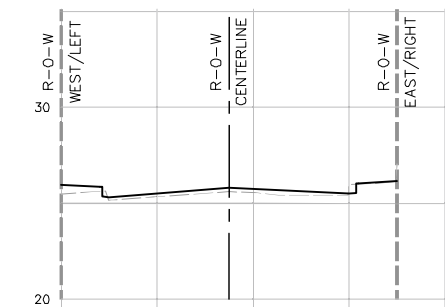
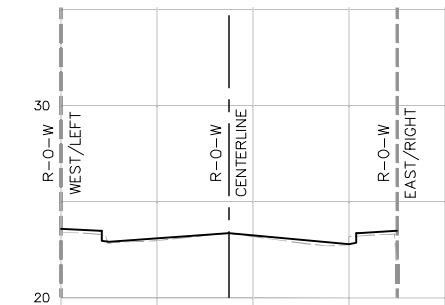


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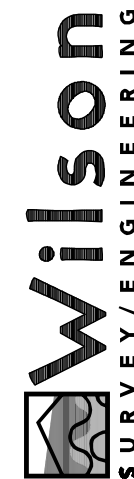
- 1) SEE SPECIFICATIONS FOR PREPARATION OF SUBGRADE UNDER PERMEABLE BALLAST.
- 2) ALL REMAINING SUBGRADE NOT UNDER PERMEABLE BALLAST SHALL BE AS APPROVED BY ENGINEER.
- 3) SEE DETAIL C, SHET C5.1 FOR GEOTEXTILE PLACEMENT AT SAND FILTER.



ROAD CROSS SLOPE SCHEDULE
NOT TO SCALE



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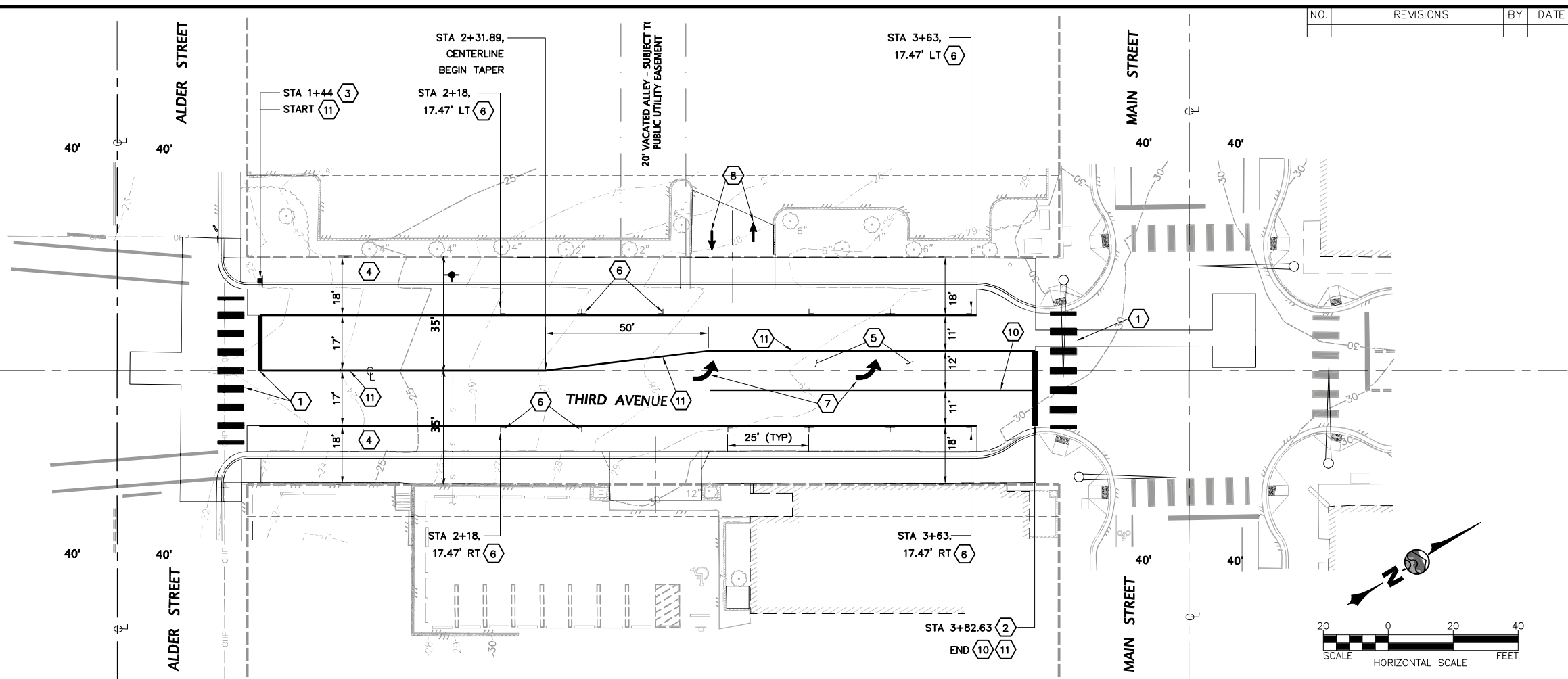
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CITY OF FERNDALE, WA
WASHINGTON
THIRD AVENUE STORMWATER IMPROVEMENTS
CROSS SECTIONS - THIRD STREET

FOR CONSTRUCTION

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

SHEET
C4.3
OF
17



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

- ALL SIGNAGE & STRIPING SHALL BE PER THE MUTCD 2009 EDITION WITH CURRENT MODIFICATIONS. ALL PAVEMENT STRIPING SHALL BE THERMOPLASTIC AND HIGH GRADE REFLECTIVITY.
- 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).

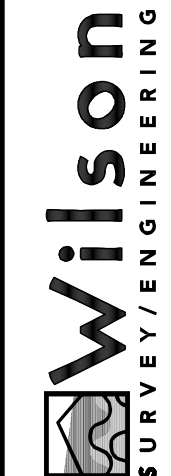
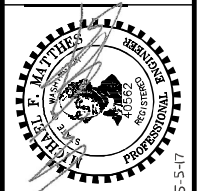


FOR
CONSTRUCTION

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

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

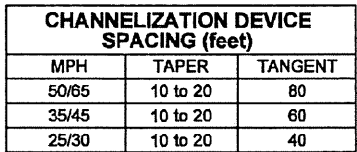
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SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	300' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	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.		



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

ONE-LANE, TWO-WAY TRAFFIC CONTROL WITH FLAGGERS

NOT TO SCALE

811 Call 811
two business days
before you dig

FOR
CONSTRUCTION

CITY OF FERNDALE, WA

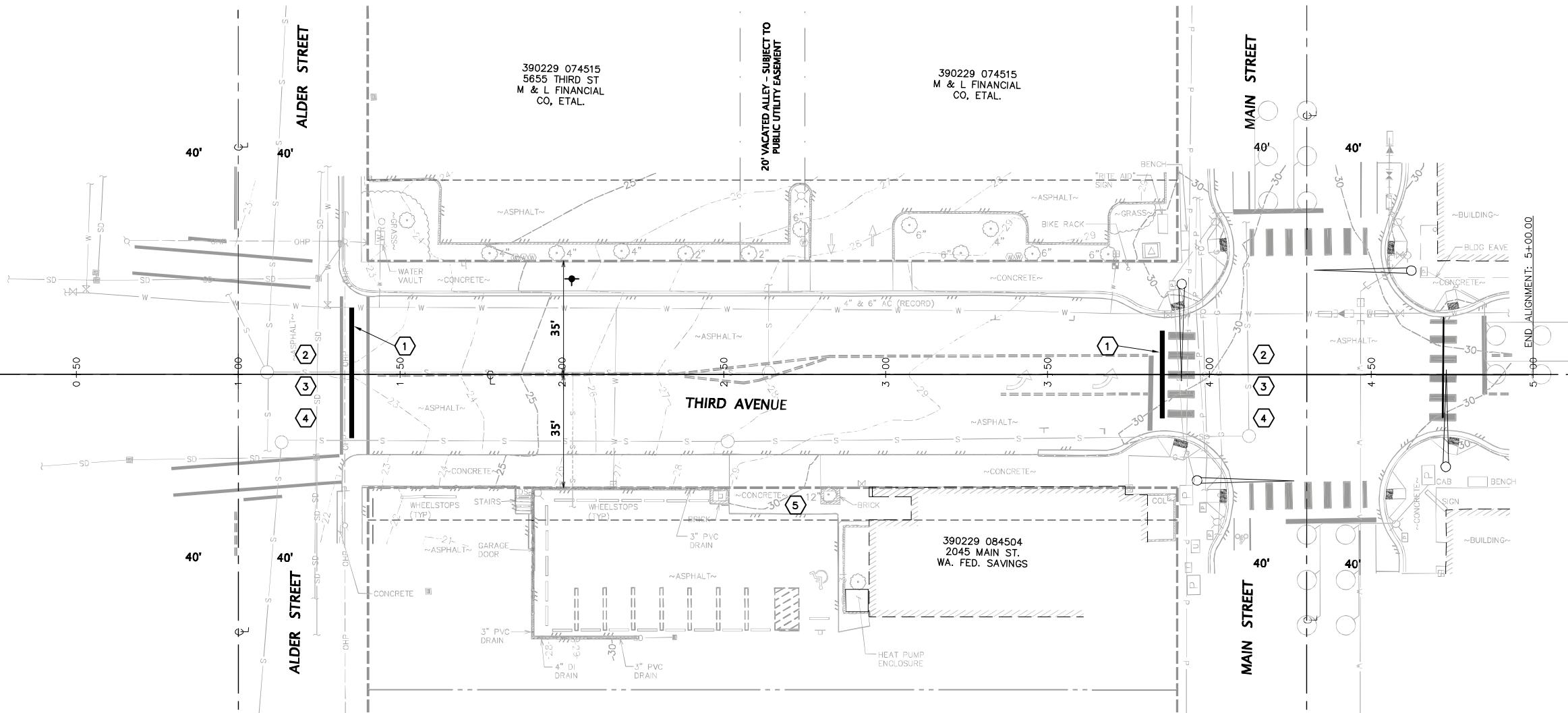
FERNDALE WASHINGTON

THIRD AVENUE STORMWATER IMPROVEMENTS

TRAFFIC CONTROL PLAN DETAILS

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

0+00 BEGIN ALIGNMENT: 0+00.00

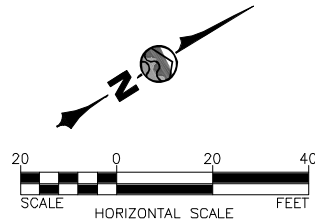


KEYED NOTES

- 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

- 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.
- 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.
- 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.
- 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.
- 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.
- NOTIFY WHATCOM TRANSPORTATION AUTHORITY (WTA) OF CONSTRUCTION. THIRD AVENUE IS ON A WTA BUS ROUTE THAT WILL REQUIRE REROUTING.
- IF ADDITIONAL SIGNAGE IS REQUIRED BEYOND THAT SHOWN, THE CONTRACTOR SHALL PROVIDE AT NO ADDITIONAL COST.
- TRAFFIC CONTROL INCLUDES CERTIFIED FLAGGERS NECESSARY TO ASSURE MAINTAINING SAFE TRAFFIC FLOW THROUGH AND AROUND THE PROJECT AREA AND THE RELATED DETOURS.
- MODIFY EXISTING REGULATORY TRAFFIC CONTROL DEVICES FOR THE DURATION OF THE PROJECT.
- REFERENCE SIGN LEGEND FOR ALL SIGNS NOT SPECIFICALLY DEPICTED ON THE PLAN.
- ALL SIGNS SHALL BE POST MOUNTED. COLOR SHALL BE BLACK ON ORANGE UNLESS NOTED OTHERWISE.
- 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.
- ***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.



NO.	REVISIONS	BY	DATE



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CITY OF FERNDALE, WA

WASHINGTON
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THIRD AVENUE STORMWATER IMPROVEMENTS
TRAFFIC CONTROL PLAN

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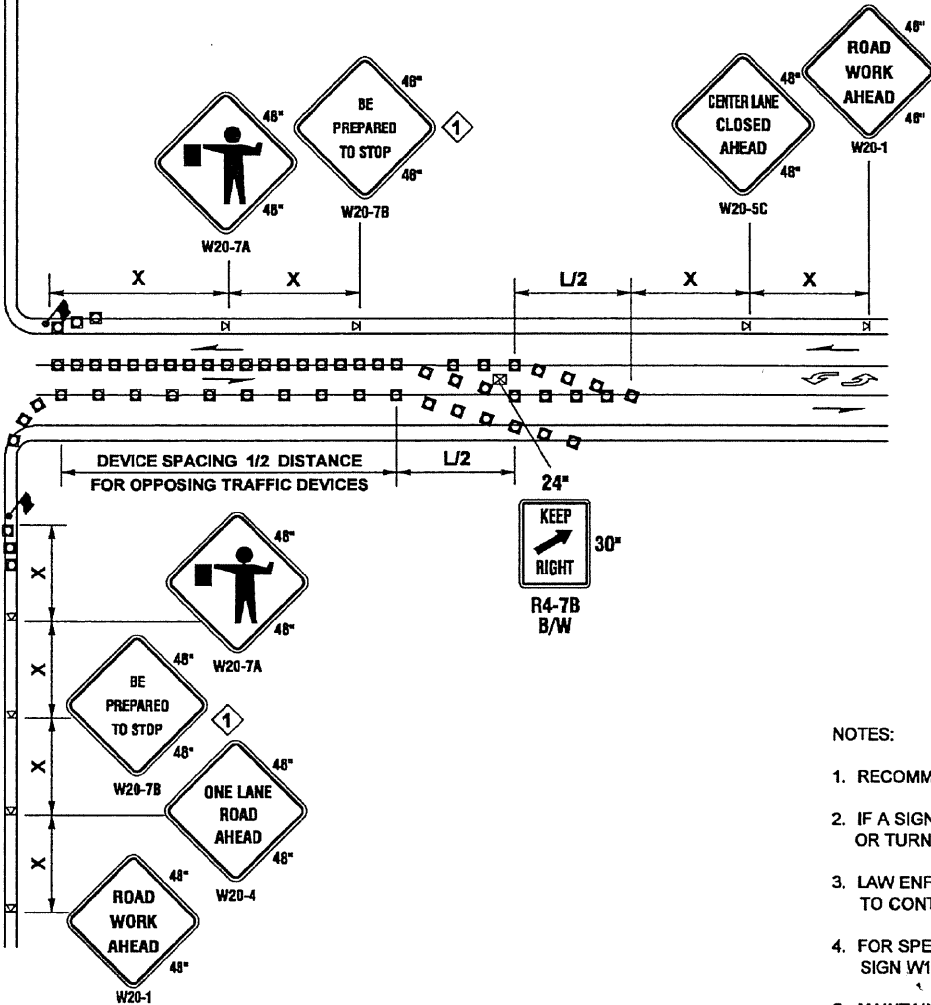
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MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	-	-

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



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

	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

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two business days
before you dig

FOR
CONSTRUCTION

CITY OF FERNDALE, WA

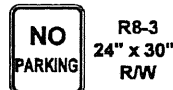
ERNDALE

WASHINGTON

THIRD AVENUE STORMWATER IMPROVEMENTS

TRAFFIC CONTROL PLAN DETAILS

17

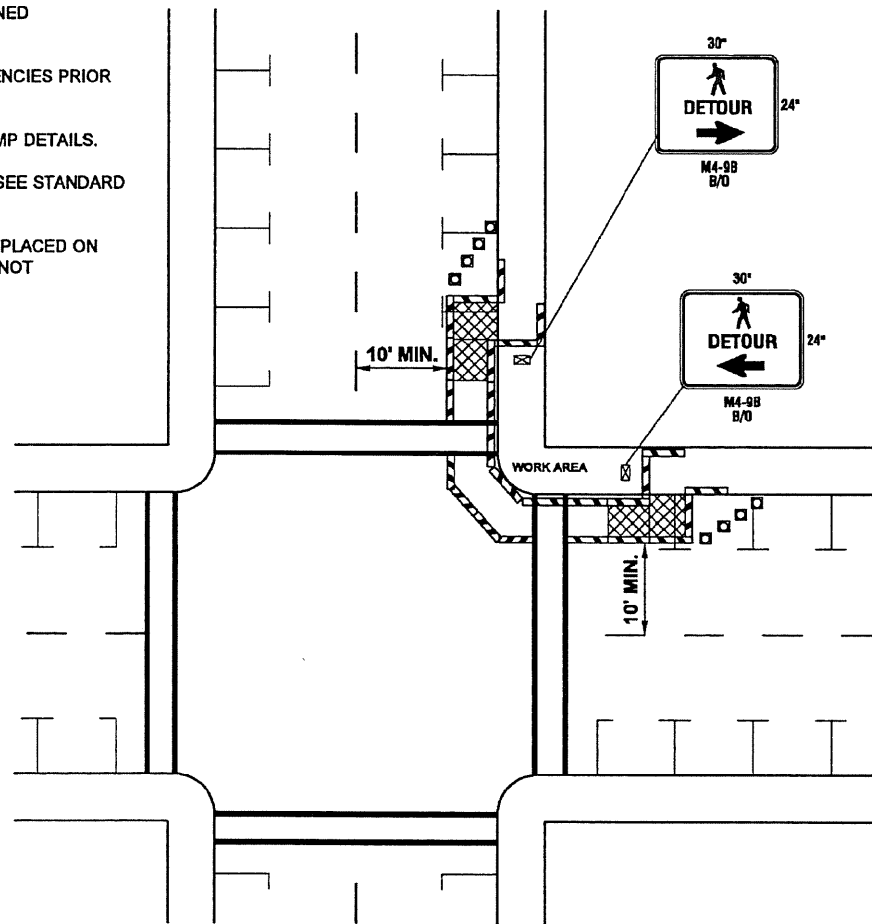


R8-3
24" x 30"
R/W

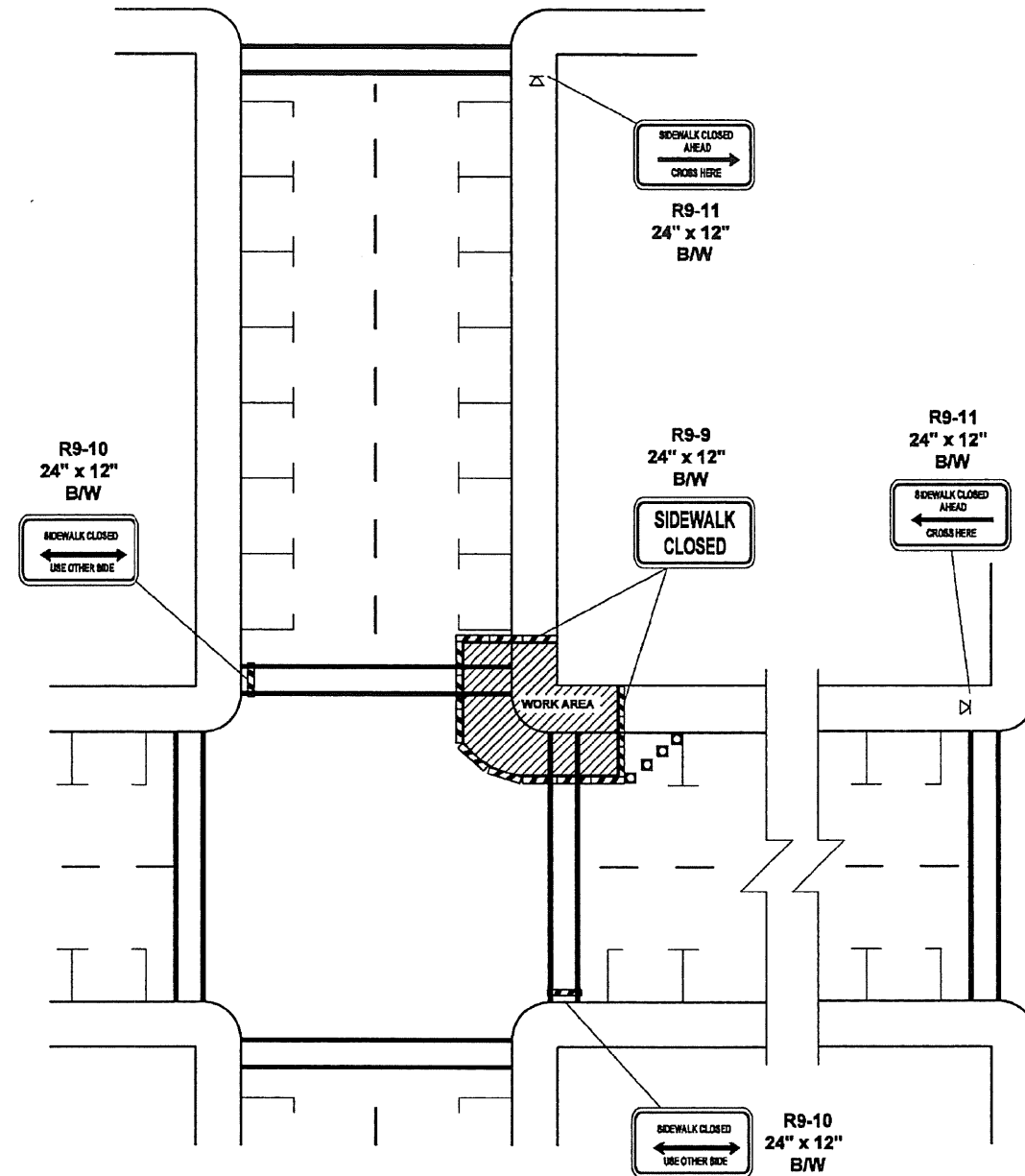
INSTALL ON TYPE 2 BARRICADES THROUGHOUT THE WORK AREA
24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL.
PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.

NOTES:

1. CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
2. A 60" PEDESTRIAN PATH WIDTH SHOULD BE MAINTAINED (48" IS THE MINIMUM).
3. CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
4. SEE SHEET TC-52 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
5. ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED, SEE STANDARD SPECIFICATION 1-10.2(1)B.
6. TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.



SIDEWALK DIVERSION



SIDEWALK DETOUR

LEGEND

- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PEDESTRIAN CHANNELIZING DEVICES
- TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

INTERSECTION PEDESTRIAN TRAFFIC CONTROL

NOT TO SCALE

FILE NAME S:\Design R P & S\4-Standards\2-Plan Sheet Library\10-Work Zone Traffic Control (TC)\TC-16\TC-16.dgn

TIME	11:43:01 AM
DATE	5/17/2013
PLOTTED BY	CyfordL
DESIGNED BY	
ENTERED BY	
CHECKED BY	
PROJ. ENGR.	
REGIONAL ADM.	
REVISION	DATE BY

REGION NO.	STATE
10	WASH
JOB NUMBER	
CONTRACT NO.	LOCATION NO.

FED.AID PROJ.NO.

LOCATION NO.

P.E. STAMP BOX

DATE

P.E. STAMP BOX

DATE

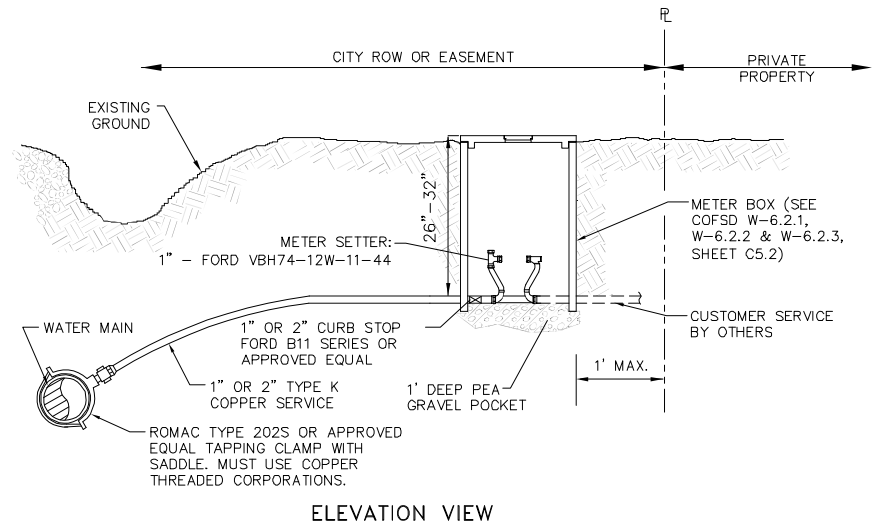


PEDESTRIAN CONTROL AND PROTECTION

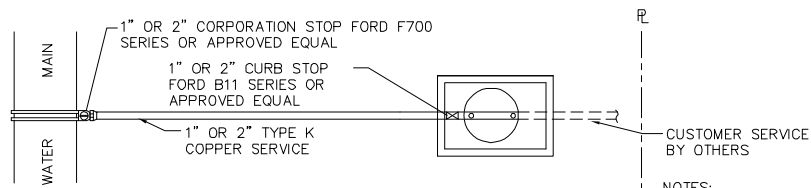
TC16

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SHEETS





ELEVATION VIEW

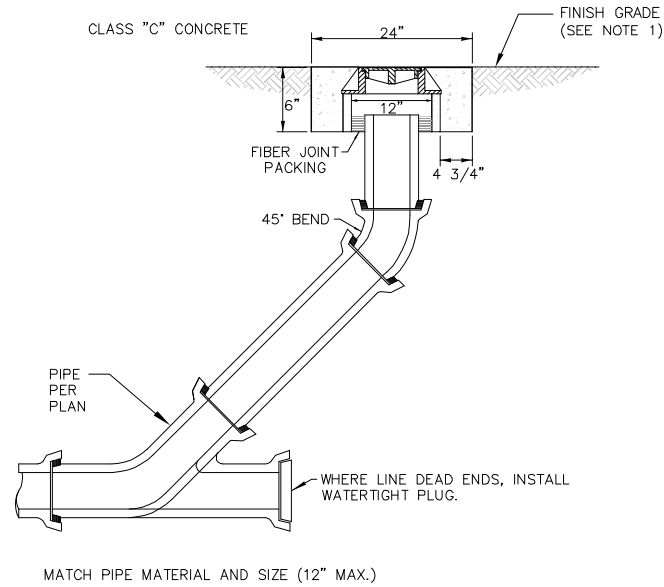


PLAN VIEW

BASED ON COF STANDARD DETAIL W-5

A WATER SERVICE DETAIL NOT TO SCALE

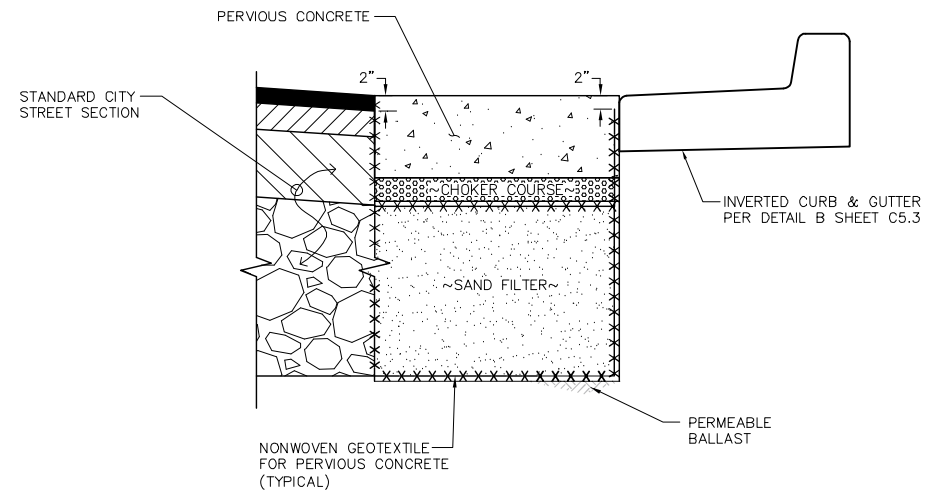
- NOTES:
1. METER(S) TO BE FURNISHED AND INSTALLED BY COF.
 2. WATER SERVICE TRENCH TO BE BACKFILLED WITH 12" MIN. DEPTH OF CLEAN SANDY FILL.



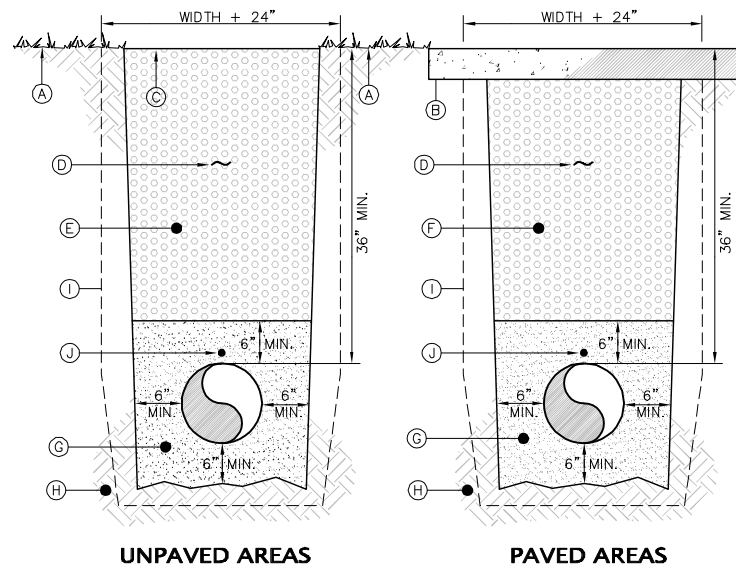
NOTE:

1. 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:
- A. HYDROSEED EXPOSED AREAS.
 - B. NEW SIDEWALK OR PAVEMENT
 - C. NEW LANDSCAPED SURFACE.
 - D. 2" METALLIC DETECTOR TAPE 8" TO 12" BELOW FINISH GRADE.
 - E. BANK RUN GRAVEL BACKFILL PER WSDOT 9-03.19 COMPACTED TO 90% MAX. DENSITY INSIDE RIGHT-OF-WAY.
 - F. BANK RUN GRAVEL BACKFILL PER WSDOT 9-03.19 COMPACTED TO 95% MAX. DENSITY
 - G. PIPE ZONE GRAVEL BEDDING PER WSDOT 9-03.12(3) COMPACTED TO 95% MAX. DENSITY
 - H. UNDISTURBED NATIVE MATERIAL
 - I. ROCK EXCAVATION PAY LIMITS COMPACTED TO 90% MAX. DENSITY
 - J. #10 AWG INSULATED TRACER WIRE STUBBED TO GROUND LEVEL EVERY 1000 FEET.

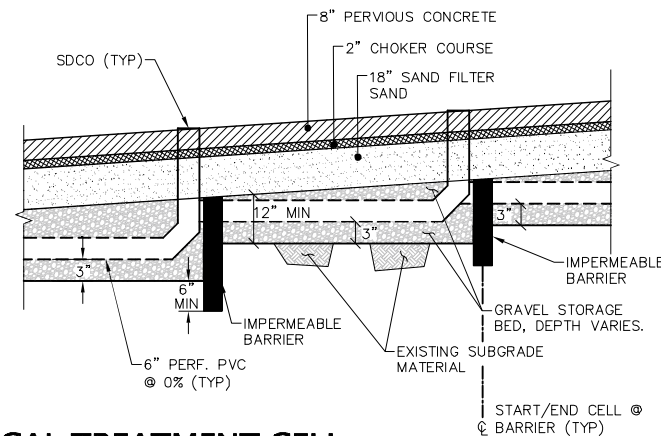
D TYPICAL TRENCHING & BACKFILL OTHER THAN SEWER & WATER

REFER TO SEWER AND WATER NOTES SHEET CO.1 AND COF STD DETAILS FOR SEWER & WATER

NOT TO SCALE

- CONSTRUCTION NOTES:
1. IMPERMEABLE BARRIER TO BE 12" THICK TRENCH DAM: 1 PART BENTONITE TO 4 PARTS SILTY SOIL.
 2. IMPERMEABLE BARRIER TO BE KEYED INTO EXISTING NATIVE SOIL (INCLUDING IN ABANDONED WATER MAIN TRENCH) A MINIMUM OF 6" BOTH HORIZONTAL & VERTICAL.
 3. 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 UPGRADIENT 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.
 4. DO NOT USE THE GRAVEL STORAGE BED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION.
 5. 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.
 6. 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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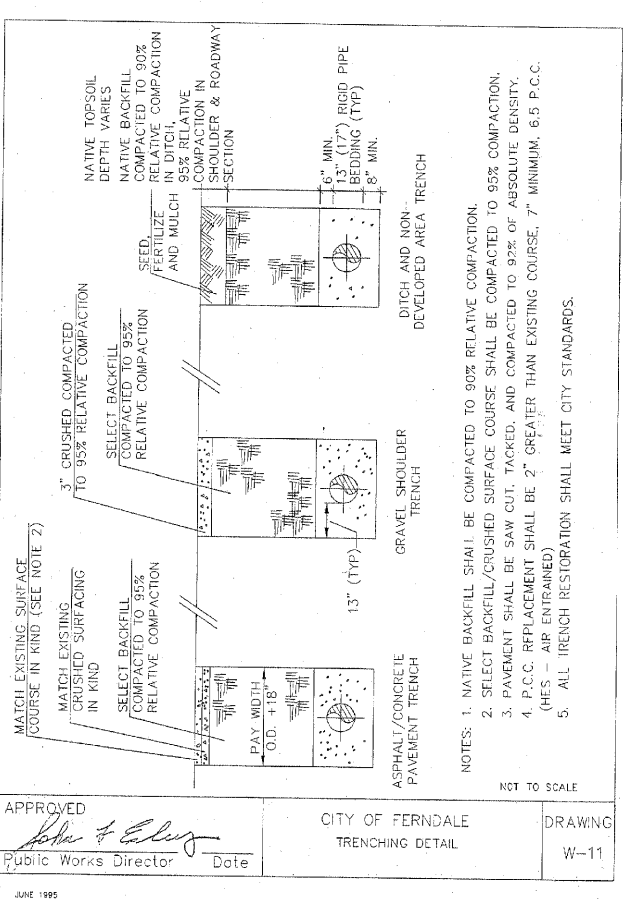
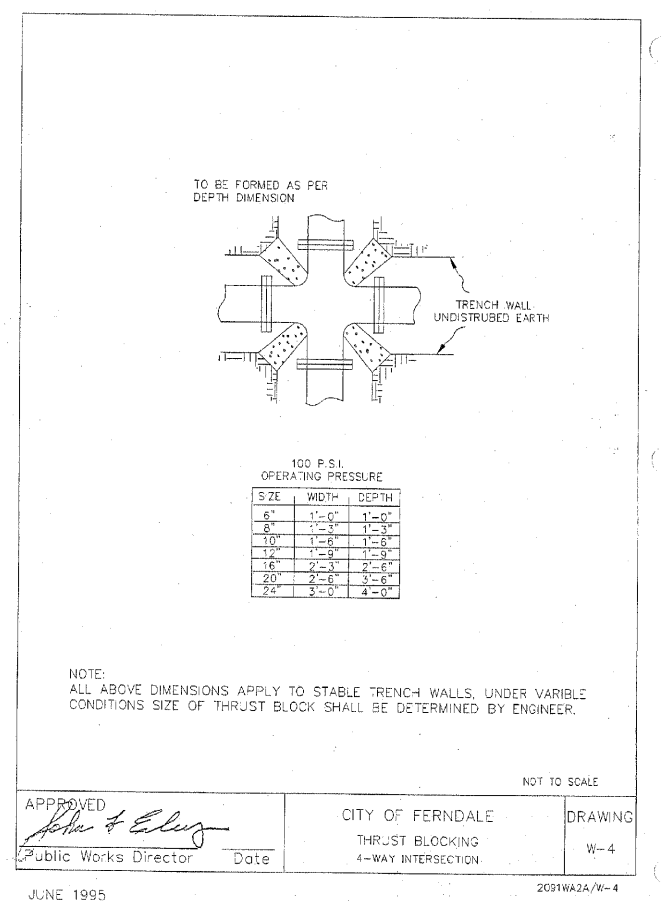
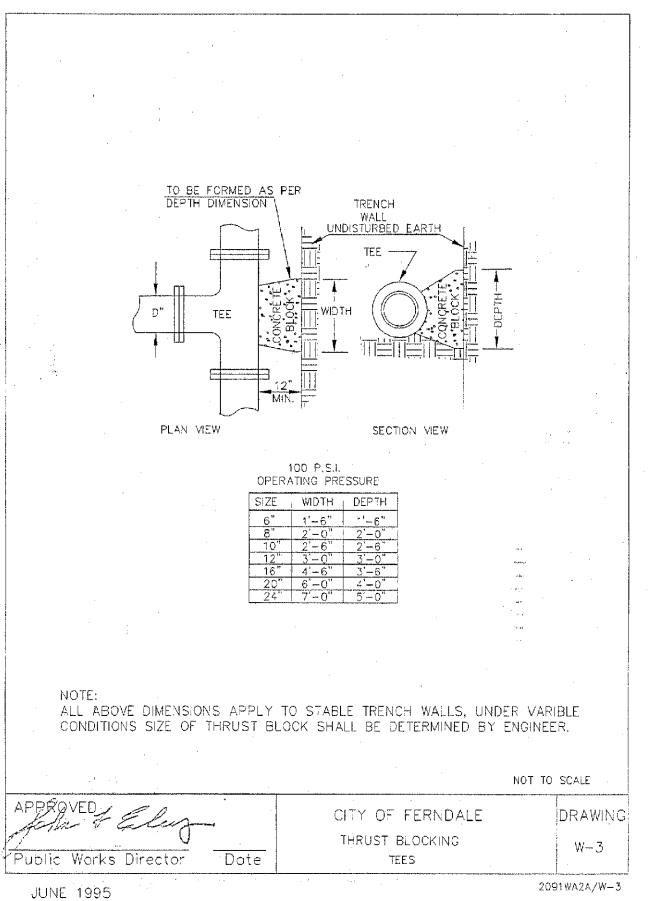
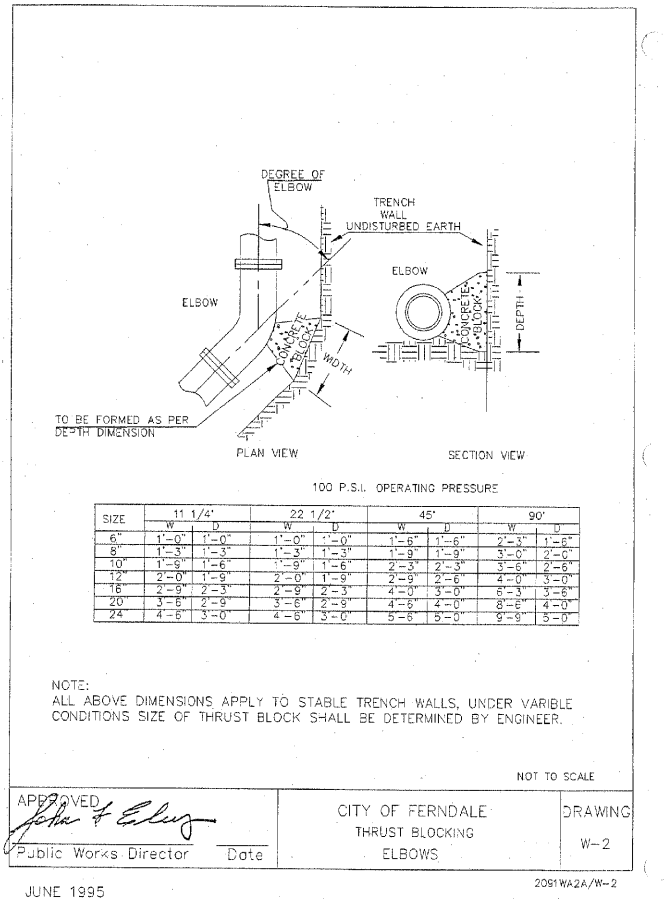
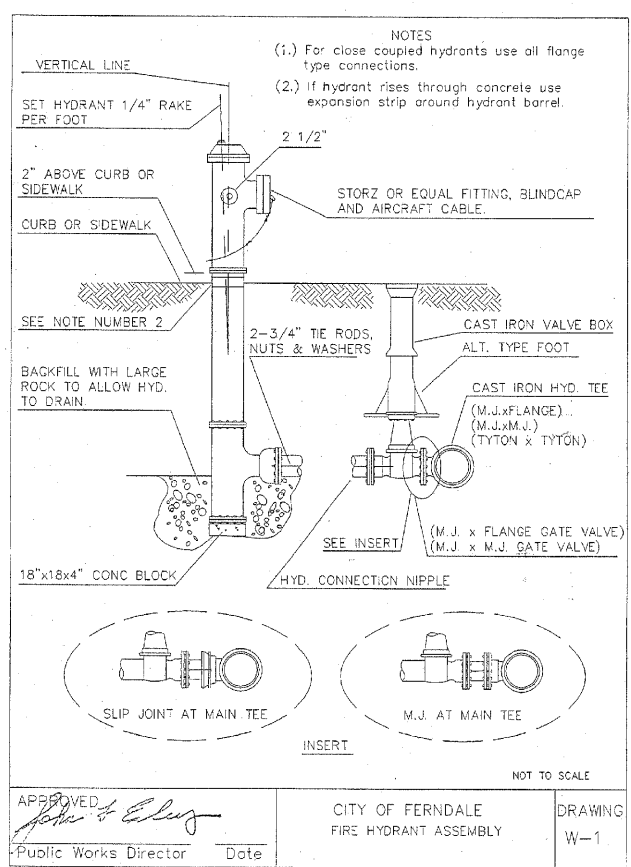
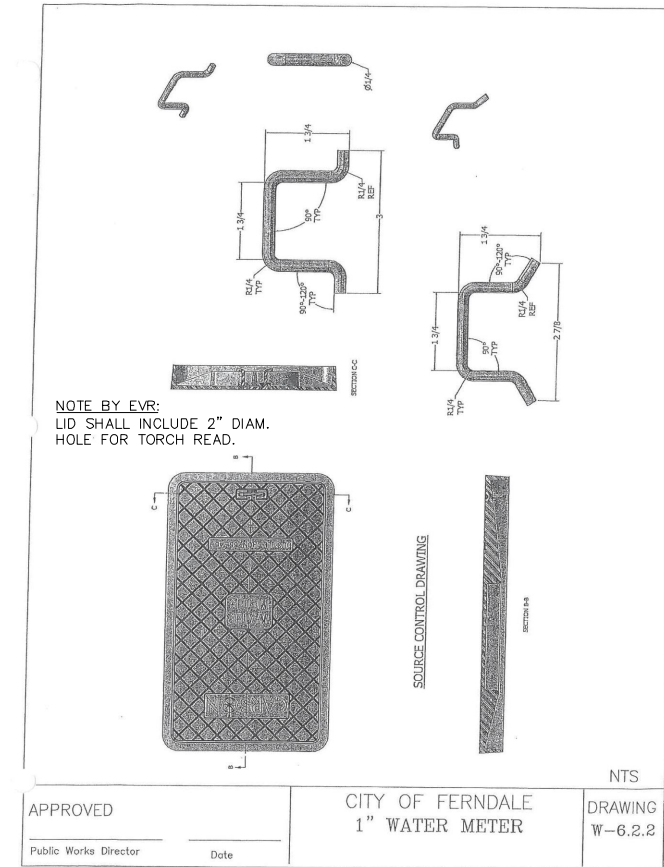
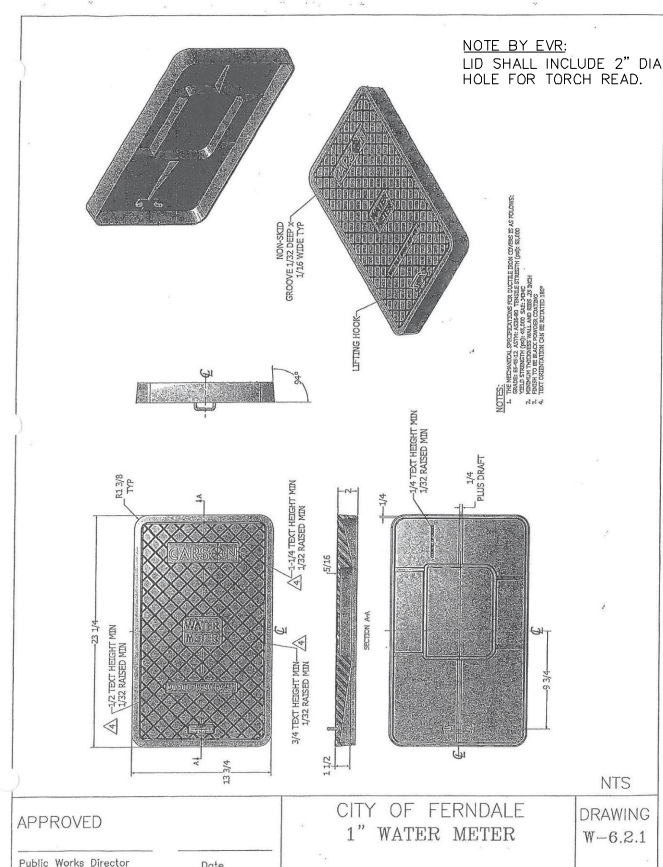
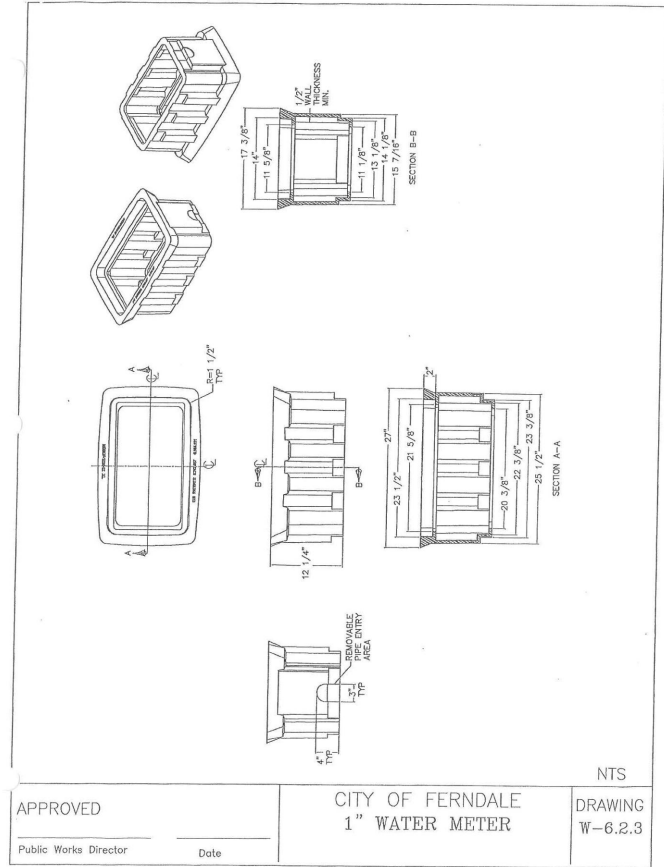
DESIGNED BY: MFM
DRAWN BY: JCS
CHECKED BY:

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

FOR
CONSTRUCTION

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

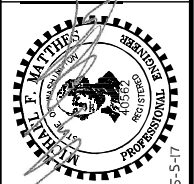
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OF: 17



FOR CONSTRUCTION

C5.2 OF 17

CITY OF FERNDAL, WA
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THIRD AVENUE STORMWATER IMPROVEMENTS
CIVIL DETAILS



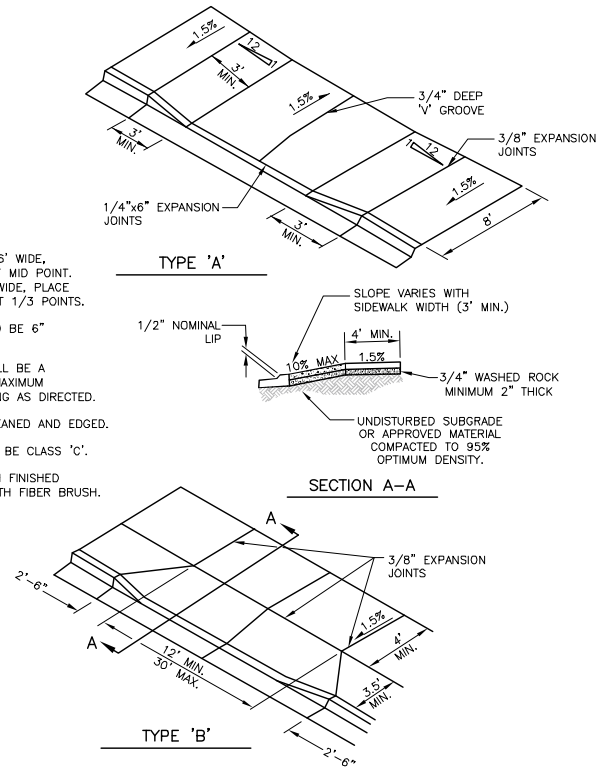
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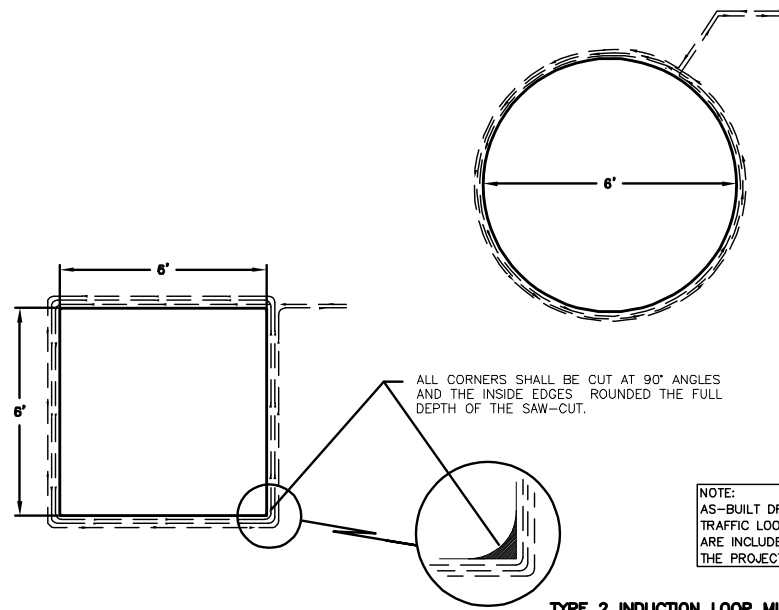
GENERAL NOTES:

- 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.



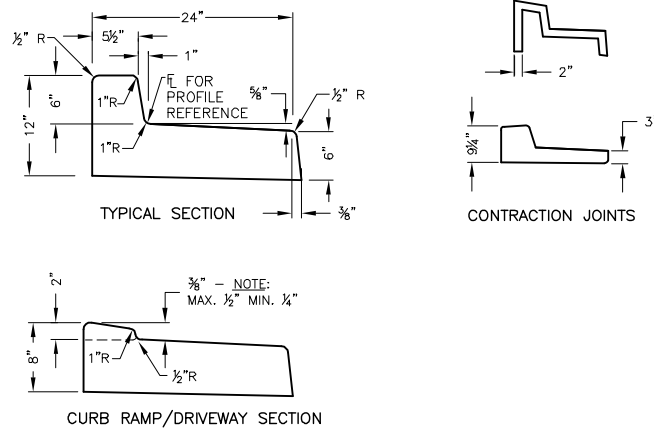
A DRIVEWAY SECTIONS
NOT TO SCALE

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

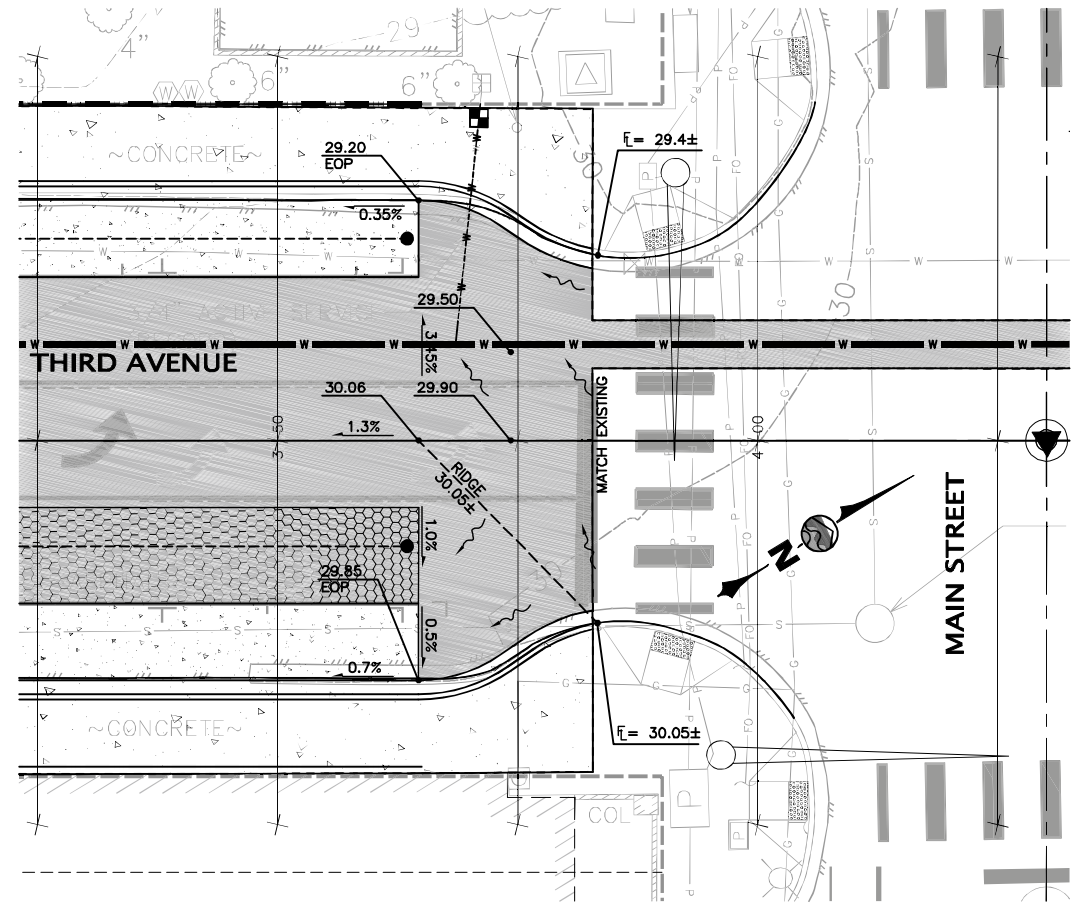
D TRAFFIC LOOP DETAIL
NOT TO SCALE



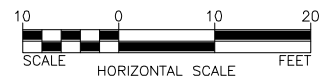
GENERAL NOTES:

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. 3/8" BITUMINOUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EDGED.
2. ALL RADII 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



WILSON ENGINEERING, LLC
805 DUPONT STREET
BELLINGHAM, WA 98225
(360) 733-6100 • FAX (360) 647-0661
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Wilson
SURVEY/ENGINEERING



DESIGNED BY MEM
DRAWN BY JCS
CHECKED BY

CITY OF FERNDALE, WA

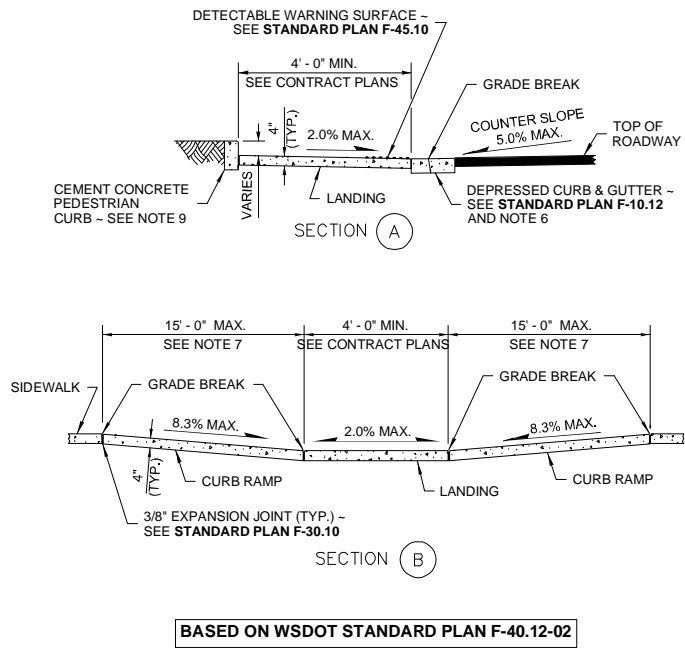
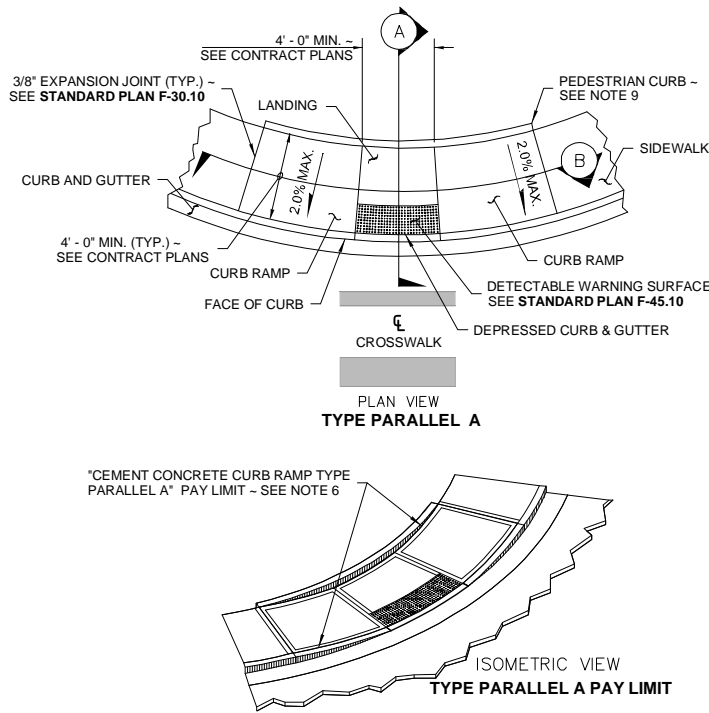
WASHINGTON
FERDALE
THIRD AVENUE STORMWATER IMPROVEMENTS
CIVIL DETAILS

FOR
CONSTRUCTION

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

SHEET C5.3
OF 17

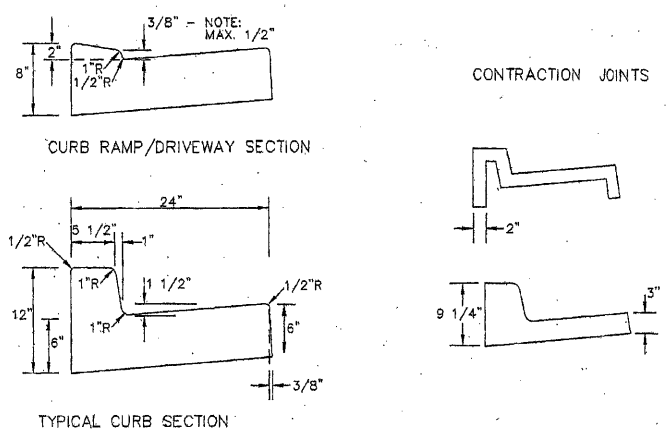
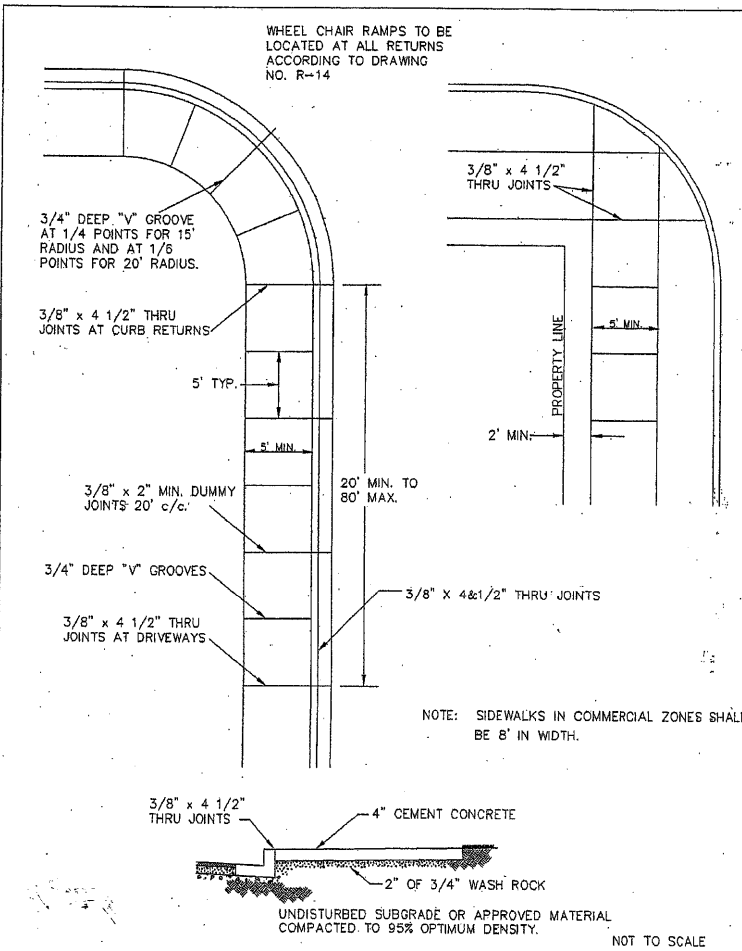




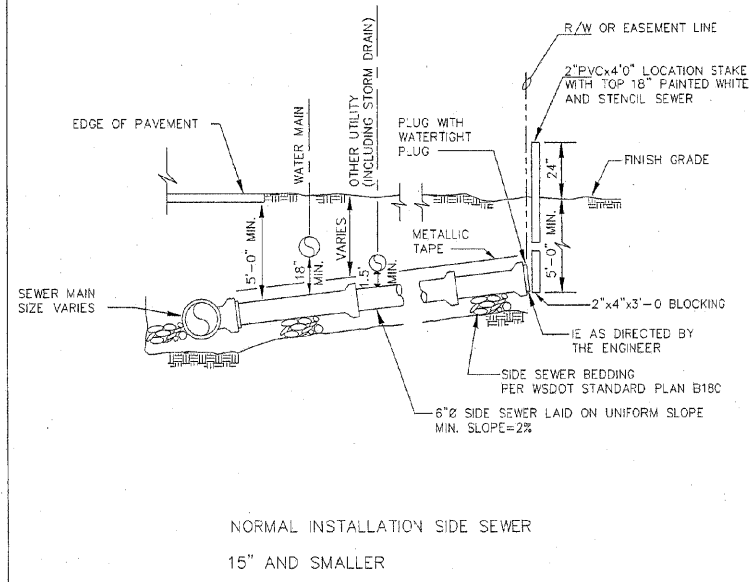
- NOTES
1. Provide a separate Curb Ramp for each marked or unmarked crosswalk. Curb Ramp location shall be placed within the width of the associated crosswalk, or as shown in the Contract Plans.
 2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface 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.

LEGEND
SLOPE IN EITHER DIRECTION

PARALLEL CURB RAMP
NOT TO SCALE



- 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.



APPROVED
Public Works Director
Date
JUNE 1995

CITY OF FERNDAL
TYPICAL SIDEWALK PLAN
AND CROSS SECTION
DRAWING
R-12
2091RD2A/R-12

APPROVED
Public Works Director
Date
JUNE 1995

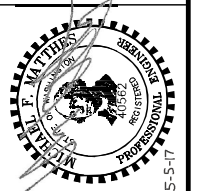
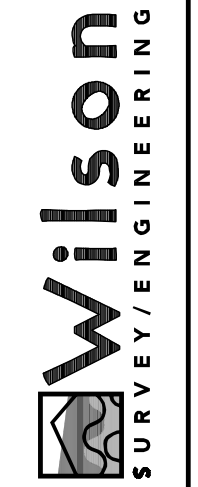
CITY OF FERNDAL
CURB AND GUTTER
DRAWING
R-9
2091RD2A/R-9

APPROVED
Public Works Director
Date
JUNE 1995

CITY OF FERNDAL
NORMAL INSTALLATION
15" AND SMALLER SEWER MAINS
DRAWING
SS-6
2091SE3A/SS-6



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THIRD AVENUE STORMWATER IMPROVEMENTS
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