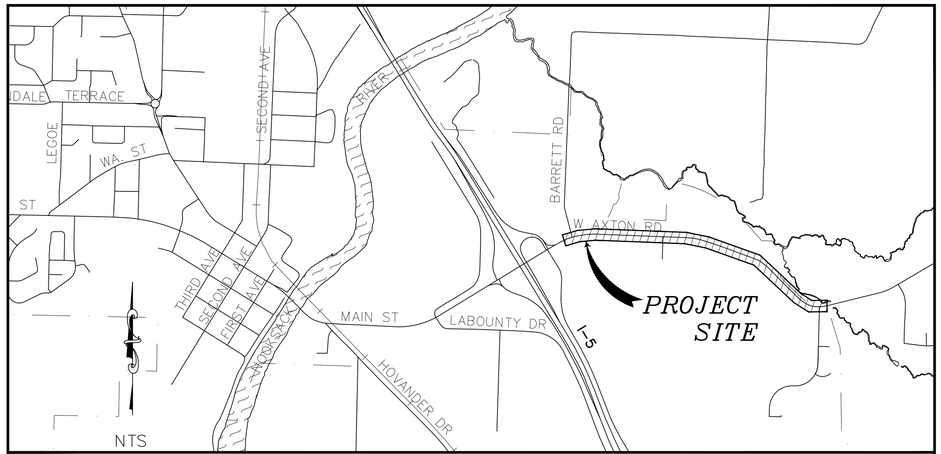
MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE

FERNDALE, WA

CITY - PROJECT NO. ST-2015-03

VICINITY MAP

PROJECT LOCATED IN SECTION 24, TOWNSHIP 40, RANGE 02, W.M. & SECTION 19, TOWNSHIP 40, RANGE 03, W.M.



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P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
COVER

DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: N/A V: N/A
SHEET 1 of 64

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LEGEND

LINETYPES

EXISTING

- TB
- BB
- DITCH ℄
- GRADE BREAK
- 95
- 94
- GUARDRAIL
- X
- HANDRAIL
- GRAVEL
- WALL
- BUILDING
- PROPERTY BOUNDARY
- RIGHT OF WAY
- RIGHT OF WAY ℄
- EASEMENT
- SECTION LINE
- ROAD ℄
- WETLANDS BOUNDARY
- STRIPE
- EDGE OF PAVEMENT
- EDGE OF CONCRETE ROAADWAY
- FLOWLINE
- TOP BACK OF CURB
- SIDEWALK
- UGP
- OHP
- UGC
- OHC
- FO
- TV
- T
- C
- G
- W
- IRR
- FM
- SS
- SD
- OHW
- RR TRACKS
- CULVERT
- TREE LINE
- CONCRETE
- WETLAND

PROPOSED

- TB = PROPOSED TOP OF BANK
- BB = PROPOSED BOTTOM OF BANK
- PROPOSED DITCH ℄
- PROPOSED GRADE BREAK
- 95 = PROPOSED MAJOR CONTOUR
- 94 = PROPOSED MINOR CONTOUR
- PROPOSED GUARDRAIL
- X = PROPOSED FENCE
- PROPOSED HANDRAIL
- PROPOSED GRAVEL
- PROPOSED WALL
- PROPOSED BUILDING
- PROPOSED PAVEMENT VALLEY
- PROPOSED RIGHT OF WAY
- PROPOSED CONSTRUCTION EASEMENT
- PROPOSED ROAD ℄
- PROPOSED SAWCUT
- PROPOSED STRIPE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB AND GUTTER
- PROPOSED PATH
- PROPOSED SIDEWALK
- UGP = PROPOSED BURIED POWER
- OHP = PROPOSED OVERHEAD POWER
- TS = PROPOSED TRAFFIC SIGNAL CONDUCTOR
- FO = PROPOSED FIBER OPTICS
- UGC = PROPOSED BURIED COMMUNICATIONS
- OHC = PROPOSED OVERHEAD COMMUNICATIONS
- HVSF = PROPOSED HIGH VISIBILITY SILT FENCE
- SF = PROPOSED SILT FENCE
- C = PROPOSED CONDUIT
- IRR = PROPOSED IRRIGATION LINE
- W = PROPOSED WATER MAIN
- FM = PROPOSED SANITARY SEWER FORCE MAIN
- SS = PROPOSED SANITARY SEWER
- SD = PROPOSED STORM DRAIN
- PROPOSED CULVERT
- PROPOSED TREE/SHRUB LINE
- PROPOSED CONC. SIDEWALK/DRIVEWAY
- PROPOSED INFILTRATION TRENCH
- PROPOSED INFILTRATION FILTER MEDIA
- PROPOSED GRIND
- PROPOSED DEMOLITION AREA
- PROPOSED ASPHALT
- PROPOSED RIGHT OF WAY ACQUISITION

SYMBOLS

EXISTING

- SIGNAL POLE
- SIGNAL POLE W/ LUMINARE
- STREET LIGHT ASSEMBLY
- YARD LIGHT
- GUY WIRE
- TRANSFORMER PAD
- POWER VAULT
- JBOX
- UTILITY POLE
- TRAFFIC SIGNAL VAULT
- GAS METER
- GAS VALVE
- TELEPHONE PEDESTAL
- COMMUNICATIONS MANHOLE
- COMMUNICATIONS VAULT
- WATER SPIGOT
- WATER BLOW OFF
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- RIP RAP OR QUARRY SPALLS
- STORM AREA DRAIN
- STORM DRAIN CATCH BASIN TYPE I/INLET
- STORM DRAIN CATCH BASIN TYPE II
- STORM CLEANOUT
- SEWER CLEANOUT
- SEWER MANHOLE
- SOIL BORING LOCATION
- MONITORING WELL
- STOP BAR OR CROSSWALK
- MB = MAIL BOX
- SIGN
- BENCH MARK
- NAIL AND SHINER
- IRON PIPE
- MONUMENT (IN CASE)
- MONUMENT (SURFACE)
- ANGLE POINT
- ROCK WALL
- TREE STUMP
- SHRUB
- TREE

PROPOSED

- HYDRANT
- COUPLER
- WATER METER
- WATER VALVE
- RIP RAP OR QUARRY SPALLS
- STORM AREA DRAIN
- STORM DRAIN CATCH BASIN TYPE I/INLET
- OR = PROPOSED STORM DRAIN CATCH BASIN TYPE II
- STORM CLEANOUT
- SANITARY SEWER CLEAN OUT
- SANITARY SEWER MANHOLE
- UTILITY POLE
- JBOX (TYPE I, II, III)
- MONITORING WELL
- STOP BAR OR CROSSWALK
- SIGN
- FLOW ARROW
- ROCK WALL
- TREE
- DETAIL NUMBER / DET / SHT / SHEET NUMBER = SECTION MARK

ABBREVIATIONS

Δ	= DELTA
ø	= DIAMETER
AC	= ASBESTOS CEMENT
AD	= ALGEBRAIC DIFFERENCE
ASPH	= ASPHALT
BLDG	= BUILDING
BVCE	= BEGIN VERTICAL CURVE ELEVATION
BVCS	= BEGIN VERTICAL CURVE STATION
C&G	= CURB & GUTTER
CATV	= CABLE TELEVISION
CDF	= CONTROLLED DENSITY FILL
℄	= CENTERLINE
CL	= CLASS
CMP	= CORRUGATED METAL PIPE
CMU	= CONCRETE MASONRY UNIT
COMP	= COMPACTED
CON	= CONIFER
CONC	= CONCRETE
CONT	= CONTOUR
CPSSP	= CORRUGATED POLYETHYLENE STORM SEWER PIPE
CULV	= CULVERT
D/W	= DRIVEWAY
DEC	= DECIDUOUS
DI	= DUCTILE IRON
E	= EAST
EL	= ELEVATION
EOP, EP	= EDGE OF PAVEMENT
EQUIV	= EQUIVALENT
EVCE	= END VERTICAL CURVE ELEVATION
EVCS	= END VERTICAL CURVE STATION
EX, EXIST	= EXISTING
IR	= EXISTING IRRIGATION
F&C	= FRAME & COVER
F&G	= FRAME & GRATE
FDC	= FIRE DEPARTMENT CONNECTION
FF	= FINISHED FLOOR
FG	= FINISHED GRADE
FL	= FLOWLINE
FL	= FLANGE
FND	= FOUND
FT	= FEET
FT/FT	= FEET PER FOOT
GALV	= GALVANIZED
GRVL	= GRAVEL
GV	= GATE VALVE
HDPE	= HIGH DENSITY POLYETHYLENE
HMA	= HOT MIX ASPHALT
HP	= HIGH POINT
HYD	= HYDRANT
IE, INV	= INVERT ELEVATION
IW	= INJECTION WELL
L	= LENGTH
LDSC	= LANDSCAPING
LF	= LINEAR FEET
LOC	= LOCATION
LP	= LOW POINT
LT	= LEFT
MAX	= MAXIMUM
MIN	= MINIMUM
MJ	= MECHANICAL JOINT
MOD	= MODIFIED
MON	= MONUMENT
MPOC	= MID-POINT ON CURVE
MTR	= METER
MW	= MONITORING WELL
MWL	= MODULAR WETLAND
N	= NORTH
N/A	= NOT APPLICABLE
NE	= NORTHEAST
NW	= NORTHWEST
NTS	= NOT TO SCALE
OC	= ON CENTER
PVMNT	= PAVEMENT
PC	= POINT OF CURVATURE
PCC	= POINT OF COMPOUND CURVATURE, PORTLAND CEMENT CONCRETE
PED	= PEDESTAL
PIV	= POST INDICATOR VALVE
POC	= POINT ON CURVE
POSS	= POSSIBLE
PRC	= POINT OF REVERSE CURVE
PROP	= PROPOSED
PT	= POINT OF TANGENCY
PVC	= POLYVINYL CHLORIDE
PVI	= POINT OF VERTICAL INTERSECTION
PWR	= POWER
R	= RADIUS
R&C	= RING & COVER
RET	= RETAINING
ROW	= RIGHT OF WAY
RT	= RIGHT
S	= SOUTH
SCH	= SCHEDULE
SD	= STORM DRAIN
SDCO	= STORM DRAIN CLEAN OUT
SDCB	= STORM DRAIN CATCH BASIN
SDMH	= STORM DRAIN MANHOLE
SE	= SOUTHEAST
SN	= EXISTING SIGN
SP	= STANDARD PLAN
SSCO	= SANITARY SEWER CLEAN OUT
SSMH	= SANITARY SEWER MANHOLE
STA	= STATION
STD	= STANDARD
SW	= SOUTHWEST
TBC	= TOP BACK OF CONCRETE
TEL	= TELEPHONE
TL	= TRAFFIC LOOP
TYP	= TYPICAL
UP	= UTILITY POLE
UTIL	= UTILITY
VC	= VERTICAL CURVE
VLT	= VAULT
VPC	= VERTICAL POINT OF CURVATURE
VPI	= VERTICAL POINT OF INTERSECTION
VPT	= VERTICAL POINT OF TANGENCY
W	= WEST
WM	= WATER METER / WATER MAIN
WSEL	= WATER SURFACE ELEVATION
WSDOT	= WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

TYLER ROSS EBBE — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

60% PLANS

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FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
LEGEND AND ABBREVIATIONS

DWG 22015 PLOT
DATE 3/29/24
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SCALE H: N/A V: N/A
SHEET 2 of 64

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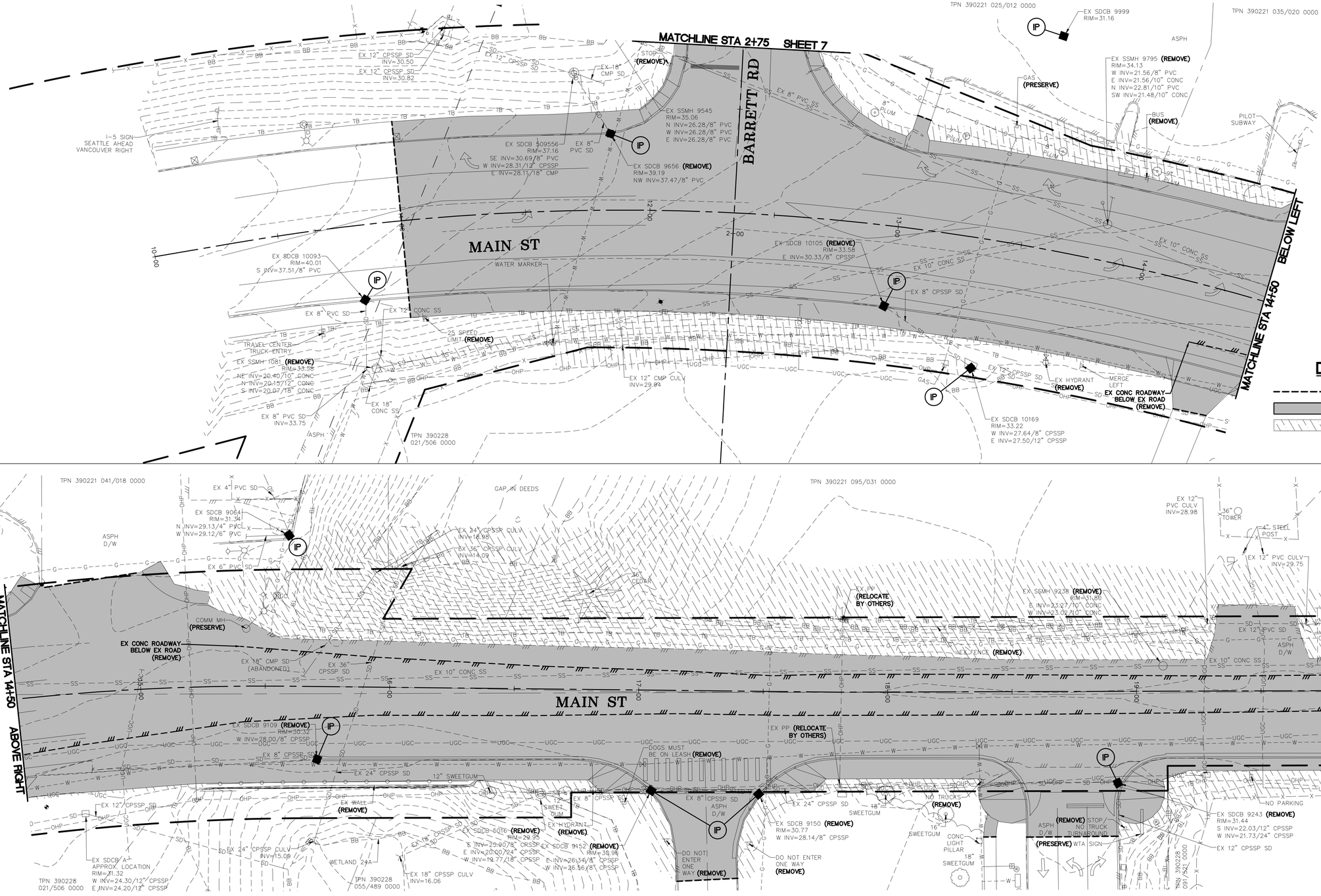

GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

DEMOLITION LEGEND

- = PROPOSED SAWCUT
- = PROPOSED DEMOLITION AREA
- = PROPOSED CLEARING AND GRUBBING LIMITS

60% PLANS

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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS

BARRETT ROAD TO OLD SETTLERS DRIVE

EX COND, TESC AND DEMO - STA 10+00 TO 19+75

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: N/A		SHEET 3 of 64

TILLER ROSS HEIM STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER 56224

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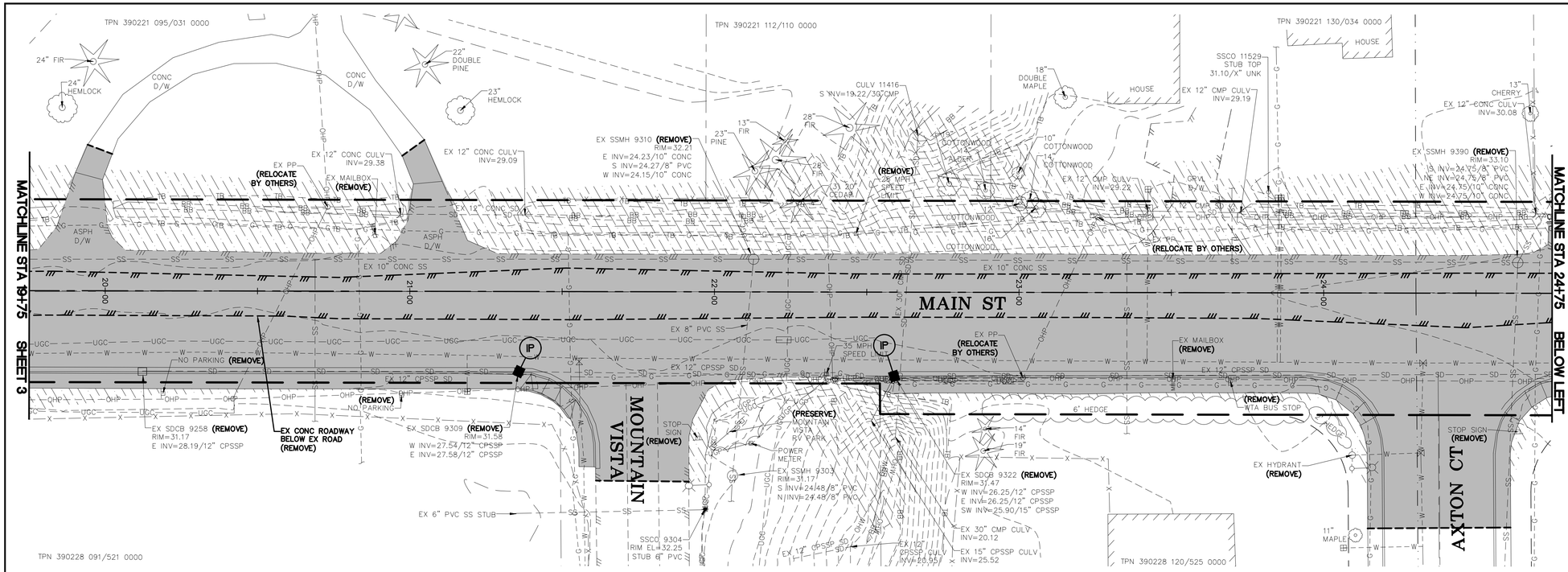

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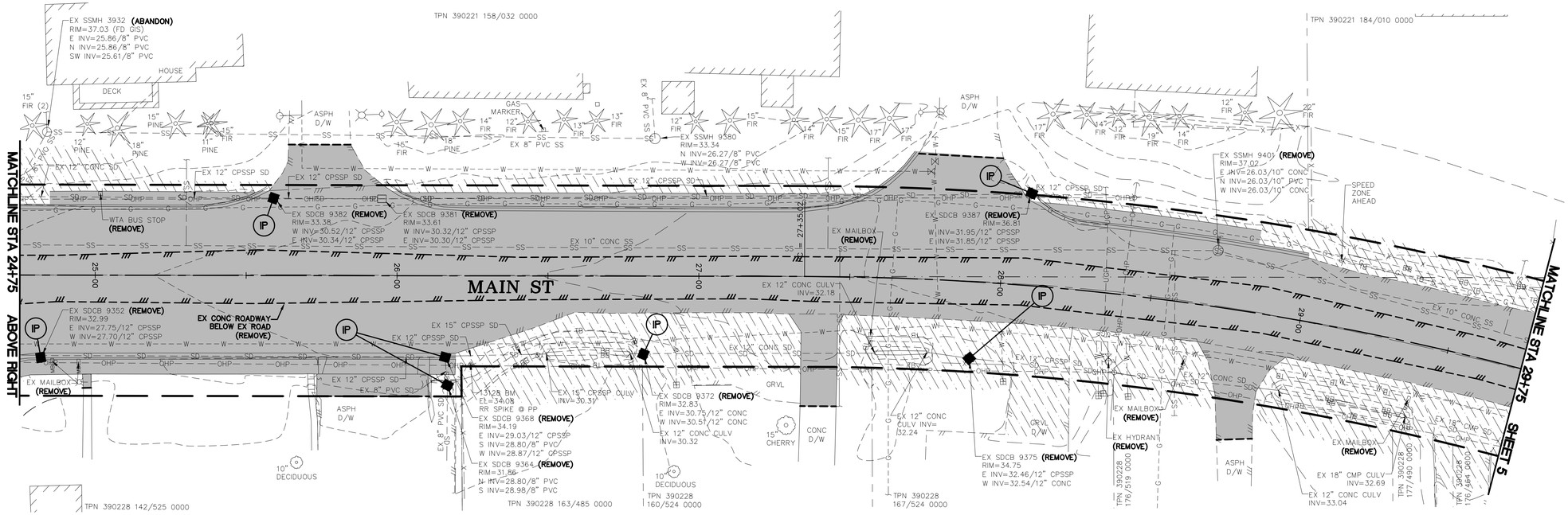

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TYLER ROSS EBBE — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER

60% PLANS	DESIGNED BY TRB DRAWN BY RGS CHECKED BY TRB	R&E Reichhardt & Ebe ENGINEERING INC P.O. Box 978 | 423 Front Street Lynden, WA 98264 (360) 354-3687	NO.	DATE	DESCRIPTION	BY	CITY OF FERNDALE 2095 MAIN ST FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
EX COND, TESC AND DEMO - STA 19+75 TO 29+75

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: N/A		SHEET 4 of 64

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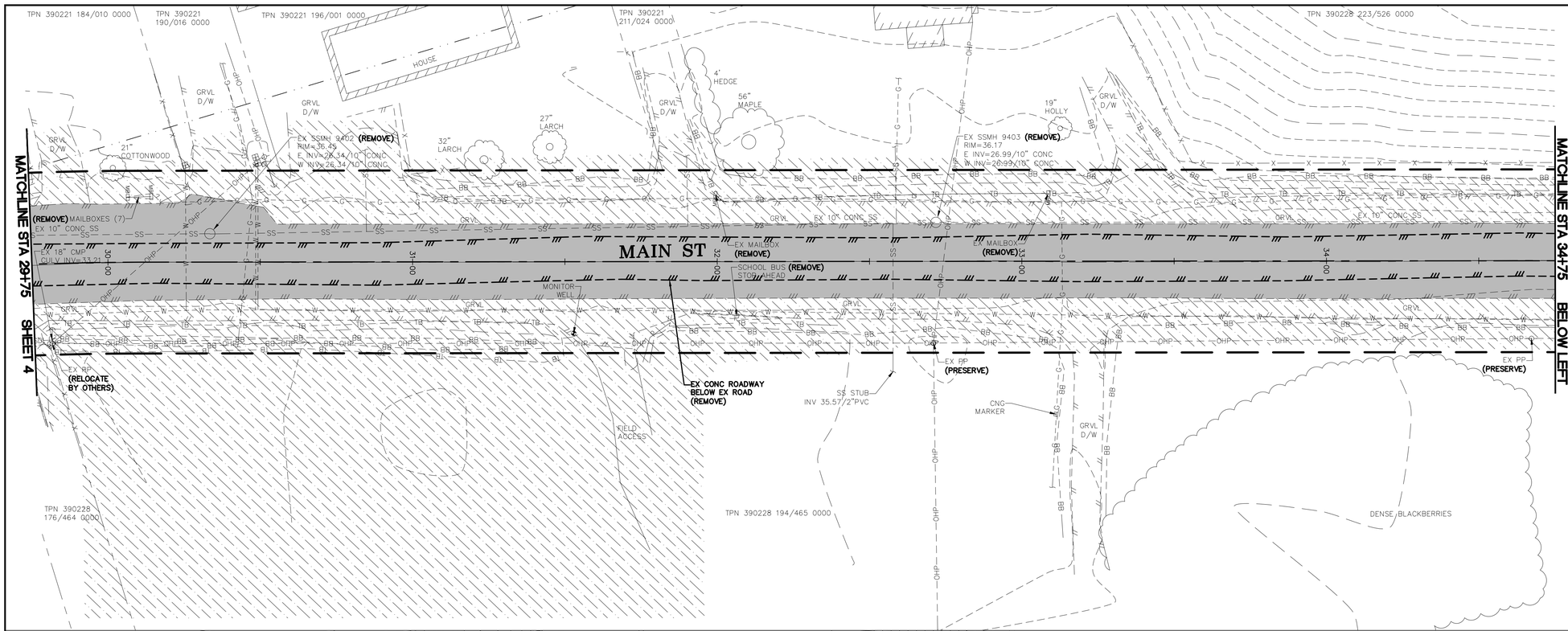

60% PLANS

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TRB	RGS	TRB

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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
EX COND, TESC AND DEMO - STA 29+75 TO 39+75

DWG 22015 PLOT		DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: N/A	SHEET 5 of 64

TYLER ROSS HELMS STATE OF WASHINGTON 56224 REGISTERED PROFESSIONAL ENGINEER

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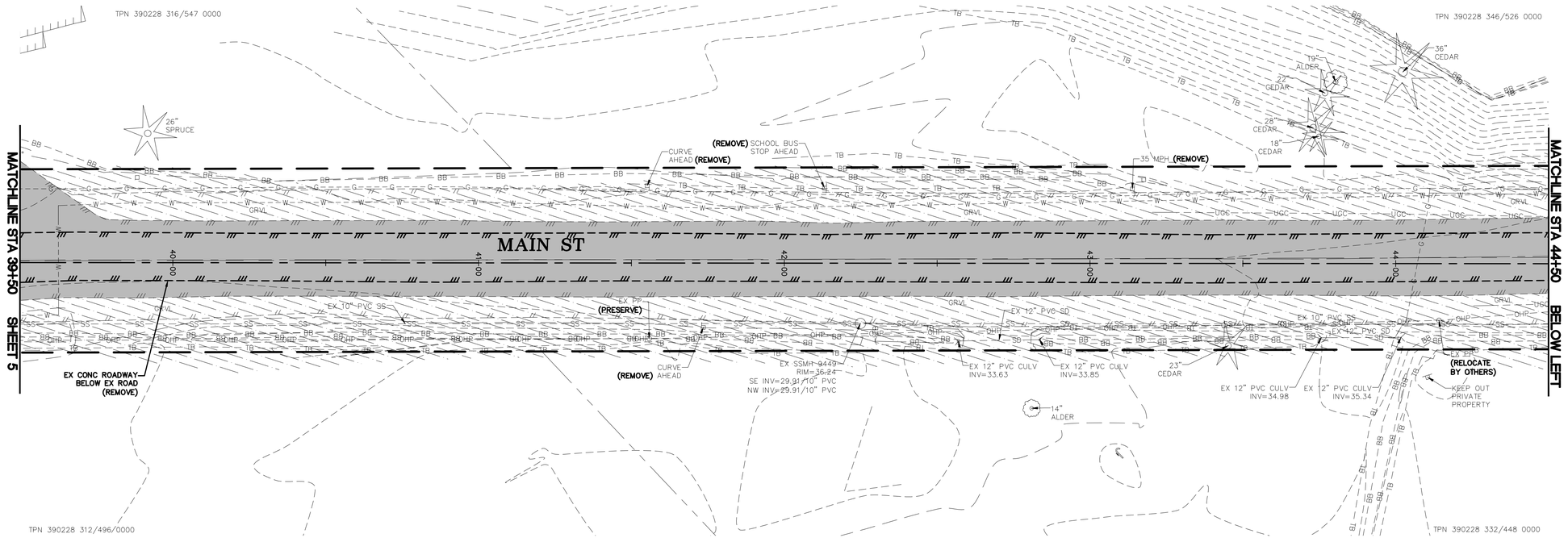

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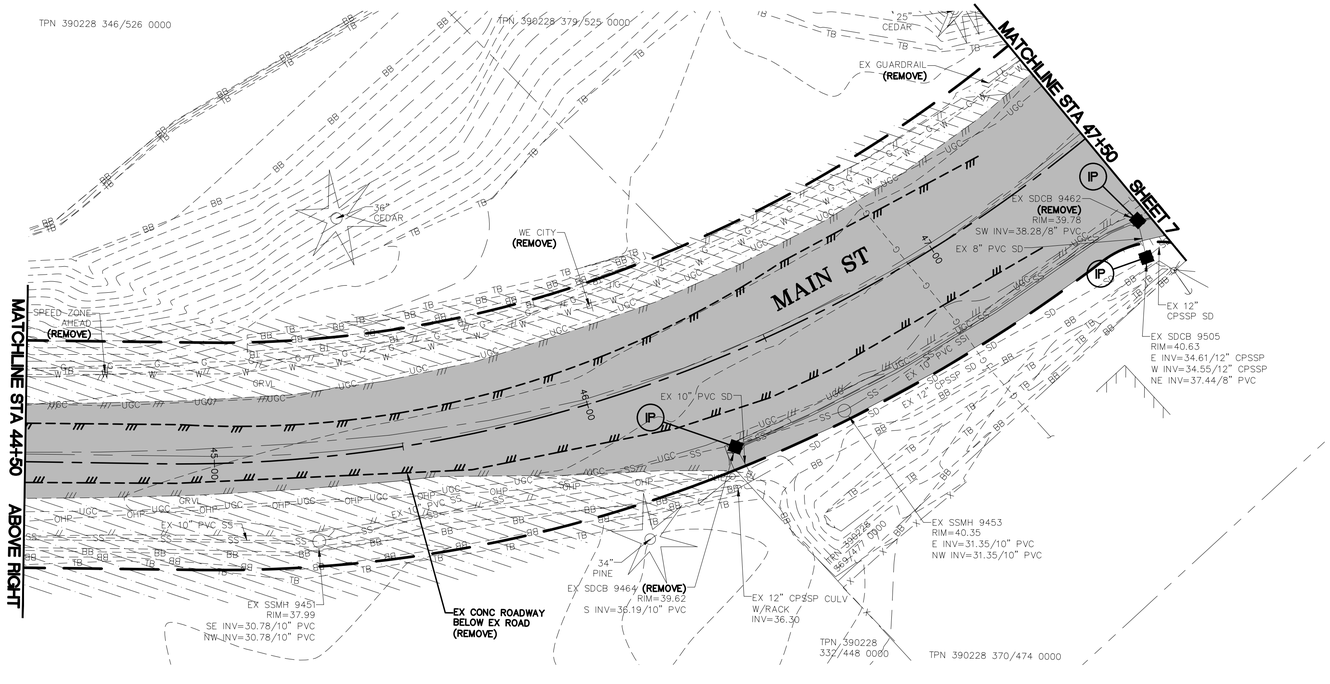

DEMOLITION LEGEND

- = PROPOSED SAWCUT
- = PROPOSED DEMOLITION AREA
- = PROPOSED CLEARING AND GRUBBING LIMITS

GRAPHIC SCALE

20 0 10 20

(IN FEET)

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TILLER ROSS EBEL — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER

60% PLANS

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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS

BARRETT ROAD TO OLD SETTLERS DRIVE

EX COND, TESC AND DEMO - STA 39+50 TO 47+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: N/A	SHEET 6 of 64

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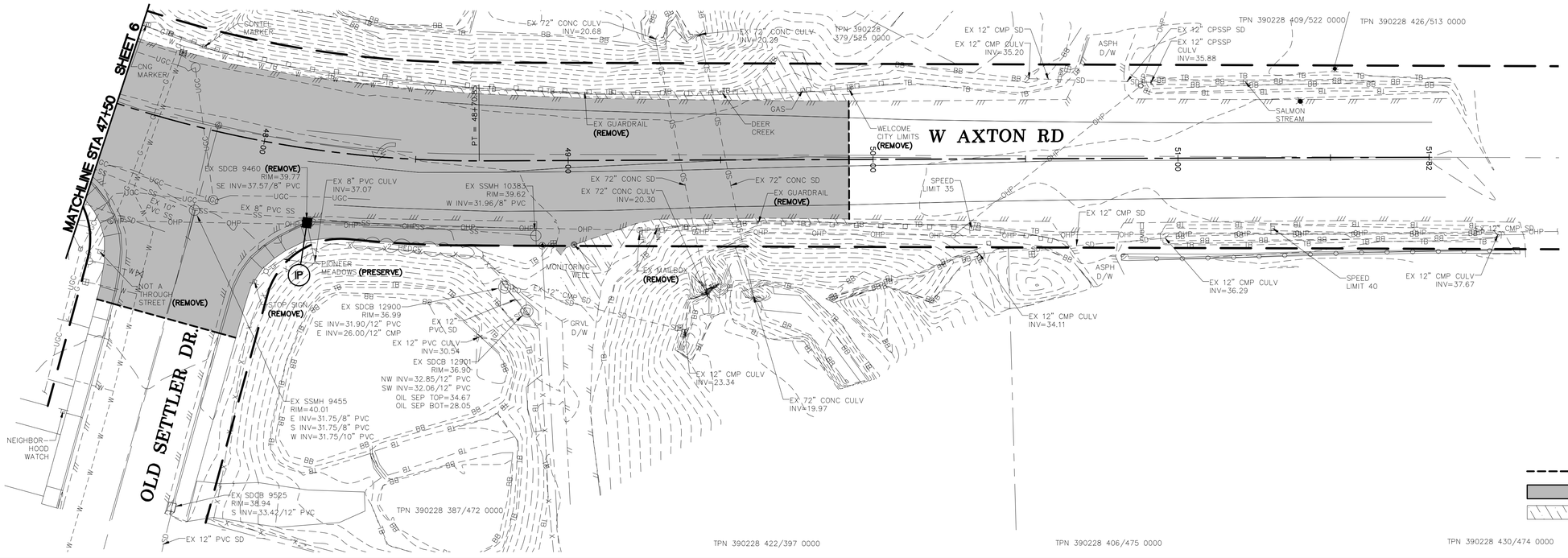

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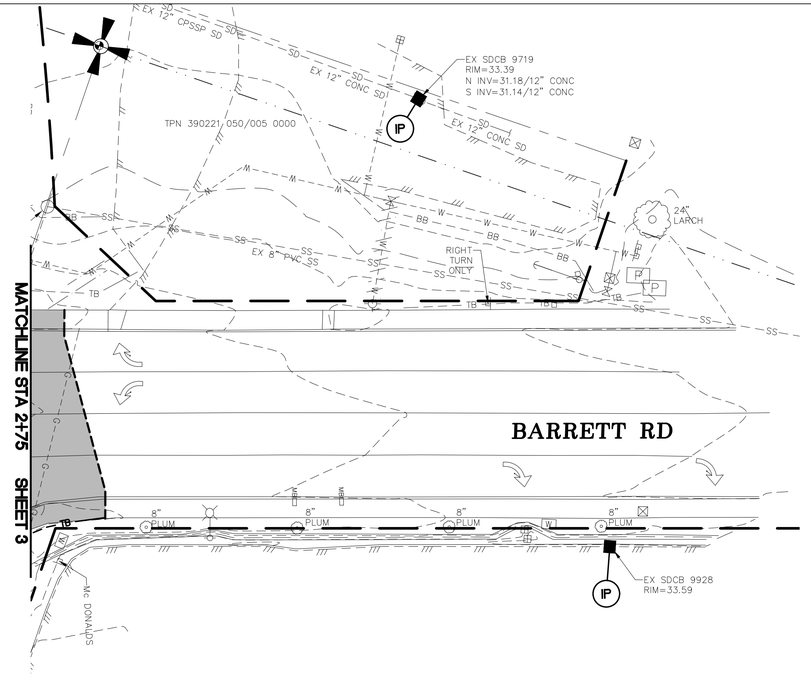

TYLER ROSS BLAKE
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER
PRELIMINARY

60% PLANS

DESIGNED BY	DRAWN BY	CHECKED BY
TRB	RGS	TRB

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Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
EX COND, TESC AND DEMO - STA 47+50 TO 52+00

DWG	DATE
22015 PLOT	3/29/24

JOB#	SCALE	SHEET
22015	H: 1"=20' V: N/A	7 of 64

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CONSTRUCTION SWPPP ELEMENTS

THIS PLAN PROVIDES THE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL ADAPT THE PLAN IN ORDER TO PREVENT SEDIMENT LADEN STORM WATER FROM LEAVING THE SITE. THE CONTRACTOR'S CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) SHALL UTILIZE THE WASHINGTON STATE DEPARTMENT OF ECOLOGY 2019 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (SWMMWW) FOR SELECTING, INSTALLING AND MAINTAINING THE CORRECT BMP'S BASED OF METHOD OF CONSTRUCTION UTILIZED BY THE CONTRACTOR. ALL ITEM'S SHALL BE OVERSEEN BY A CSECL AND BE SUBJECT TO INSPECTION BY THE ENGINEER AND/OR CITY OF FERNDALE PUBLIC WORKS DEPARTMENT.

ELEMENT 1: PRESERVE VEGETATION/MARK CLEARING LIMITS

- BEFORE BEGINNING LAND DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRADING, CLEARLY MARK ALL CLEARING LIMITS, SENSITIVE AREAS AND THEIR BUFFERS, AND TREES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA.
- RETAIN THE DUFF LAYER, NATIVE TOP SOIL, AND NATURAL VEGETATION IN AN UNDISTURBED STATE TO THE MAXIMUM DEGREE PRACTICABLE.

BMP C101: PRESERVING NATURAL VEGETATION
BMP C102: BUFFER ZONES
BMP C103/C233: HIGH VISIBILITY SILT FENCE

ELEMENT 2: ESTABLISH CONSTRUCTION ACCESS

- LIMIT CONSTRUCTION VEHICLE ACCESS AND EXIT TO ONE ROUTE, IF POSSIBLE.
- STABILIZE ACCESS POINTS WITH A PAD OF QUARRY SPALLS, CRUSHED ROCK, OR OTHER EQUIVALENT BMPS, TO MINIMIZE TRACKING OF SEDIMENT ONTO PUBLIC ROADS.
- LOCATE WHEEL WASH OR TIRE BATHS ON SITE, IF THE STABILIZED CONSTRUCTION ENTRANCE IS NOT EFFECTIVE IN PREVENTING TRACKING SEDIMENT ONTO ROADS.
- IF SEDIMENT IS TRACKED OFF SITE, CLEAN THE AFFECTED ROADWAY THOROUGHLY AT THE END OF EACH DAY, OR MORE FREQUENTLY AS NECESSARY (FOR EXAMPLE, DURING WET WEATHER). REMOVE SEDIMENT FROM ROADS BY SHOVELING, SWEEPING, OR PICK UP AND TRANSPORT THE SEDIMENT TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- CONDUCT STREET WASHING ONLY AFTER SEDIMENT IS REMOVED IN ACCORDANCE WITH THE ABOVE BULLET.
- CONTROL STREET WASH WASTEWATER BY PUMPING BACK ON-SITE, OR OTHERWISE PREVENT IT FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.

BMP C105: STABILIZED CONSTRUCTION ENTRANCE/EXIT
BMP C106: WHEEL WASH
BMP C107: CONSTRUCTION ROAD/PARKING AREA STABILIZATION

ELEMENT 3: CONTROL FLOW RATES

- PROTECT PROPERTIES AND WATERWAYS DOWNSTREAM OF DEVELOPMENT SITES FROM EROSION AND THE ASSOCIATED DISCHARGE OF TURBID WATERS DUE TO INCREASES IN THE VELOCITY AND PEAK VOLUMETRIC FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE.
- WHERE NECESSARY TO COMPLY WITH THE BULLET ABOVE, CONSTRUCT STORMWATER RETENTION OR DETENTION FACILITIES AS ONE OF THE FIRST STEPS IN GRADING. ASSURE THAT DETENTION FACILITIES FUNCTION PROPERLY BEFORE CONSTRUCTING SITE IMPROVEMENTS (E.G. IMPERVIOUS SURFACES).
- IF PERMANENT INFILTRATION PONDS ARE USED FOR FLOW CONTROL DURING CONSTRUCTION, PROTECT THESE FACILITIES FROM SILTATION DURING THE CONSTRUCTION PHASE.

BMP C208: TRIANGULAR SILT DIKE (GEOTEXTILE-ENCASED CHECK DAM)
BMP C235: WATTLES

ELEMENT 4: INSTALL SEDIMENT CONTROLS

- DESIGN, INSTALL, AND MAINTAIN EFFECTIVE EROSION CONTROLS AND SEDIMENT CONTROLS TO MINIMIZE THE DISCHARGE OF POLLUTANTS.
- CONSTRUCT SEDIMENT CONTROL BMPS (SEDIMENT PONDS, TRAPS, FILTERS, ETC.) AS ONE OF THE FIRST STEPS IN GRADING. THESE BMPS SHALL BE FUNCTIONAL BEFORE OTHER LAND DISTURBING ACTIVITIES TAKE PLACE.
- MINIMIZE SEDIMENT DISCHARGES FROM THE SITE. THE DESIGN, INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS MUST ADDRESS FACTORS SUCH AS THE AMOUNT, FREQUENCY, INTENSITY AND DURATION OF PRECIPITATION, THE NATURE OF RESULTING STORMWATER RUNOFF, AND SOIL CHARACTERISTICS, INCLUDING THE RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT ON THE SITE.
- DIRECT STORMWATER RUNOFF FROM DISTURBED AREAS THROUGH A SEDIMENT POND OR OTHER APPROPRIATE SEDIMENT REMOVAL BMP, BEFORE THE RUNOFF LEAVES A CONSTRUCTION SITE OR BEFORE DISCHARGE TO AN INFILTRATION FACILITY. RUNOFF FROM FULLY STABILIZED AREAS MAY BE DISCHARGED WITHOUT A SEDIMENT REMOVAL BMP, BUT MUST MEET THE FLOW CONTROL PERFORMANCE STANDARD IN ELEMENT #3, BULLET #1.
- LOCATE BMPS INTENDED TO TRAP SEDIMENT ON-SITE IN A MANNER TO AVOID INTERFERENCE WITH THE MOVEMENT OF JUVENILE SALMONIDS ATTEMPTING TO ENTER OFF-CHANNEL AREAS OR DRAINAGES.
- WHERE FEASIBLE, DESIGN OUTLET STRUCTURES THAT WITHDRAW IMPOUNDED STORMWATER FROM THE SURFACE TO AVOID DISCHARGING SEDIMENT THAT IS STILL SUSPENDED LOWER IN THE WATER COLUMN.

BMP C208: TRIANGULAR SILT DIKE (GEOTEXTILE-ENCASED CHECK DAM)

ELEMENT 5: STABILIZE SOILS

- STABILIZE EXPOSED AND UNWORKED SOILS BY APPLICATION OF EFFECTIVE BMPS THAT PREVENT EROSION. APPLICABLE BMPS INCLUDE, BUT ARE NOT LIMITED TO: TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, EROSION CONTROL FABRICS AND MATTING, SOIL APPLICATION OF POLYACRYLAMIDE (PAM), THE EARLY APPLICATION OF GRAVEL BASE EARLY ON AREAS TO BE PAVED, AND DUST CONTROL.
- CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION.
- CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND TO MINIMIZE DOWNSTREAM CHANNEL AND STREAM BANK EROSION.
- SOILS MUST NOT REMAIN EXPOSED AND UNWORKED FOR MORE THAN THE TIME PERIODS SET FORTH BELOW TO PREVENT EROSION:
  - DURING THE DRY SEASON (MAY 1 – SEPT. 30): 7 DAYS
  - DURING THE WET SEASON (OCTOBER 1 – APRIL 30): 2 DAYS
- STABILIZE SOILS AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST.
- STABILIZE SOIL STOCKPILES FROM EROSION, PROTECTED WITH SEDIMENT TRAPPING MEASURES, AND WHERE POSSIBLE, BE LOCATED AWAY FROM STORM DRAIN INLETS, WATERWAYS AND DRAINAGE CHANNELS.
- MINIMIZE THE AMOUNT OF SOIL EXPOSED DURING CONSTRUCTION ACTIVITY.
- MINIMIZE THE DISTURBANCE OF STEEP SLOPES.
- MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

BMP C120: TEMPORARY AND PERMANENT SEEDING
BMP C122: NETS AND BLANKETS
BMP C123: PLASTIC COVERING (AS NEEDED)
BMP C130: SURFACE ROUGHENING
BMP C140: DUST CONTROL

ELEMENT 6: PROTECT SLOPES

- DESIGN AND CONSTRUCT CUT-AND-FILL SLOPES IN A MANNER TO MINIMIZE EROSION. APPLICABLE PRACTICES INCLUDE, BUT ARE NOT LIMITED TO, REDUCING CONTINUOUS LENGTH OF SLOPE WITH TERRACING AND DIVERSIONS, REDUCING SLOPE STEEPNESS, AND ROUGHENING SLOPE SURFACES (FOR EXAMPLE, TRACK WALKING).
- DIVERT OFF-SITE STORMWATER (RUN-ON) OR GROUND WATER AWAY FROM SLOPES AND DISTURBED AREAS WITH INTERCEPTOR DIKES, PIPES AND/OR SWALES. OFF-SITE STORMWATER SHOULD BE MANAGED SEPARATELY FROM STORMWATER GENERATED ON THE SITE.
- AT THE TOP OF SLOPES, COLLECT DRAINAGE IN PIPE SLOPE DRAINS OR PROTECTED CHANNELS TO PREVENT EROSION.
- TEMPORARY PIPE SLOPE DRAINS MUST HANDLE THE PEAK VOLUMETRIC FLOW RATE CALCULATED USING A 10-MINUTE TIME STEP FROM A TYPE 1A, 10-YEAR, 24-HOUR FREQUENCY STORM FOR THE DEVELOPED CONDITION. ALTERNATIVELY, THE 10-YEAR AND 1-HOUR FLOW RATE PREDICTED BY AN APPROVED CONTINUOUS RUNOFF MODEL, INCREASED BY A FACTOR OF 1.6, MAY BE USED. THE HYDROLOGIC ANALYSIS MUST USE THE EXISTING LAND COVER CONDITION FOR PREDICTING FLOW RATES FROM TRIBUTARY AREAS OUTSIDE THE PROJECT LIMITS. FOR TRIBUTARY AREAS ON THE PROJECT SITE, THE ANALYSIS MUST USE THE TEMPORARY OR PERMANENT PROJECT LAND COVER CONDITION, WHICHEVER WILL PRODUCE THE HIGHEST FLOW RATES. IF USING THE WESTERN WASHINGTON HYDROLOGY MODEL (WWHM) TO PREDICT FLOWS, BARE SOIL AREAS SHOULD BE MODELED AS "LANDSCAPED" AREA.
- PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE OF TRENCHES, CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS.
- PLACE CHECK DAMS AT REGULAR INTERVALS WITHIN CONSTRUCTED CHANNELS THAT ARE CUT DOWN A SLOPE.

BMP C120: TEMPORARY AND PERMANENT SEEDING
BMP C130: SURFACE ROUGHENING

ELEMENT 7: PROTECT DRAIN INLETS

- PROTECT ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION SO THAT STORMWATER RUNOFF SHALL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENT.
- CLEAN OR REMOVE AND REPLACE INLET PROTECTION DEVICES WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE (UNLESS A DIFFERENT STANDARD IS SPECIFIED BY THE PRODUCT MANUFACTURER).

BMP C220: STORM DRAIN INLET PROTECTION

ELEMENT 8: STABILIZE CHANNELS AND OUTLETS

- DESIGN, CONSTRUCT, AND STABILIZE ALL ON-SITE CONVEYANCE CHANNELS TO PREVENT EROSION FROM THE FOLLOWING EXPECTED PEAK FLOWS:
  - CHANNELS MUST HANDLE THE PEAK VOLUMETRIC FLOW RATE CALCULATED USING A 10-MINUTE STEP FROM A TYPE 1A, 10- YEAR, 24-HOUR FREQUENCY STORM FOR THE DEVELOPED CONDITION. ALTERNATIVELY, THE 10-YEAR, 1-HOUR FLOW RATE INDICATED BY AN APPROVED CONTINUOUS RUNOFF MODEL, INCREASED BY A FACTOR OF 1.6, MAY BE USED. THE HYDROLOGIC ANALYSIS MUST USE THE EXISTING LAND COVER CONDITION FOR PREDICTING FLOW RATES FROM TRIBUTARY AREAS OUTSIDE THE PROJECT LIMITS. FOR TRIBUTARY AREAS ON THE PROJECT SITE, THE ANALYSIS MUST USE THE TEMPORARY OR PERMANENT PROJECT LAND COVER CONDITION, WHICHEVER WILL PRODUCE THE HIGHEST FLOW RATES. IF USING THE WESTERN WASHINGTON HYDROLOGY MODEL (WWHM) TO PREDICT FLOWS, BARE SOIL AREAS SHOULD BE MODELED AS "LANDSCAPED AREA.
- PROVIDE STABILIZATION, INCLUDING ARMORING MATERIAL, ADEQUATE TO PREVENT EROSION OF OUTLETS, ADJACENT STREAM BANKS, SLOPES AND DOWNSTREAM REACHES AT THE OUTLETS OF ALL CONVEYANCE SYSTEMS.

BMP C209: OUTLET PROTECTION

ELEMENT 9: CONTROL POLLUTANTS

- DESIGN, INSTALL, IMPLEMENT AND MAINTAIN EFFECTIVE POLLUTION PREVENTION MEASURES TO MINIMIZE THE DISCHARGE OF POLLUTANTS.
- HANDLE AND DISPOSE OF ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS THAT OCCUR ON-SITE IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
- PROVIDE COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND OTHER MATERIALS THAT HAVE THE POTENTIAL TO POSE A THREAT TO HUMAN HEALTH OR THE ENVIRONMENT. ON-SITE FUELING TANKS MUST INCLUDE SECONDARY CONTAINMENT. SECONDARY CONTAINMENT MEANS PLACING TANKS OR CONTAINERS WITHIN AN IMPERVIOUS STRUCTURE CAPABLE OF CONTAINING 110% OF THE VOLUME CONTAINED IN THE LARGEST TAKE WITHIN THE CONTAINMENT STRUCTURE. DOUBLE-WALLED TANKS DO NOT REQUIRE ADDITIONAL SECONDARY CONTAINMENT.
- CONDUCT MAINTENANCE, FUELING, AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES USING SPILL PREVENTION AND CONTROL MEASURES. CLEAN CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY SPILL INCIDENT.
- DISCHARGE WHEEL WASH OR TIRE BATH WASTEWATER TO A SEPARATE ON-SITE TREATMENT SYSTEM THAT PREVENTS DISCHARGE TO SURFACE WATER, SUCH AS CLOSED-LOOP RECIRCULATION OR UPLAND APPLICATION, OR TO THE SANITARY SEWER, WITH LOCAL SEWER DISTRICT APPROVAL.
- APPLY FERTILIZERS AND PESTICIDES IN A MANNER AND AT APPLICATION RATES THAT WILL NOT RESULT IN LOSS OF CHEMICAL TO STORMWATER RUNOFF. FOLLOW MANUFACTURERS' LABEL REQUIREMENTS FOR APPLICATION RATES AND PROCEDURES.
- USE BMPS TO PREVENT CONTAMINATION OF STORMWATER RUNOFF BY PH MODIFYING SOURCES. THE SOURCES FOR THIS CONTAMINATION INCLUDE, BUT ARE NOT LIMITED TO: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHING AND CURING WATERS, WASTE STREAMS GENERATED FROM CONCRETE GRINDING AND SAWING, EXPOSED AGGREGATE PROCESSES, DEWATERING OF CONCRETE VAULTS, CONCRETE PUMPING AND MIXER WASHOUT WATERS.
- ADJUST THE PH OF STORMWATER IF NECESSARY TO PREVENT VIOLATIONS OF WATER QUALITY STANDARDS.
- ASSURE THAT WASHOUT OF CONCRETE TRUCKS IS PERFORMED OFF-SITE OR IN DESIGNATED CONCRETE WASHOUT AREAS ONLY. DO NOT WASH OUT CONCRETE TRUCKS ONTO THE GROUND, OR INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS. DO NOT DUMP EXCESS CONCRETE ON-SITE, EXCEPT IN DESIGNATED CONCRETE WASHOUT AREAS. CONCRETE SPILLAGE OR CONCRETE DISCHARGE TO SURFACE WATERS OF THE STATE IS PROHIBITED.
- OBTAIN WRITTEN APPROVAL FROM ECOLOGY BEFORE USING CHEMICAL TREATMENT OTHER THAN CO2 OR DRY ICE TO ADJUST PH.

BMP C151: CONCRETE HANDLING
BMP C154: CONCRETE WASHOUT

ELEMENT 10: CONTROL DE-WATERING

- DISCHARGE FOUNDATION, VAULT, AND TRENCH DE-WATERING WATER, WHICH HAS SIMILAR CHARACTERISTICS TO STORMWATER RUNOFF AT THE SITE, INTO A CONTROLLED CONVEYANCE SYSTEM BEFORE DISCHARGE TO A SEDIMENT TRAP OR SEDIMENT POND.
- DISCHARGE CLEAN, NON-TURBID DE-WATERING WATER, SUCH AS WELL-POINT GROUND WATER, TO SYSTEMS TRIBUTARY TO, OR DIRECTLY INTO, SURFACE WATERS OF THE STATE, AS SPECIFIED IN ELEMENT #8, PROVIDED THE DE-WATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OF RECEIVING WATERS. DO NOT ROUTE CLEAN DEWATERING WATER THROUGH STORMWATER SEDIMENT PONDS. NOTE THAT SURFACE WATERS OF THE STATE MAY EXIST ON A CONSTRUCTION SITE AS WELL AS OFF SITE; FOR EXAMPLE, A CREEK RUNNING THROUGH A SITE.
- HANDLE HIGHLY TURBID OR OTHERWISE CONTAMINATED DEWATERING WATER SEPARATELY FROM STORMWATER.
- OTHER TREATMENT OR DISPOSAL OPTIONS MAY INCLUDE:
  1. INFILTRATION.
  2. TRANSPORT OFF-SITE IN A VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS.
  3. ECOLOGY-APPROVED ON-SITE CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES.
  4. SANITARY OR COMBINED SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, IF THERE IS NO OTHER OPTION.
  5. USE OF A SEDIMENTATION BAG THAT DISCHARGES TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DEWATERING.

CONTRACTOR TO UTILIZE APPROPRIATE BMPS FROM THE 2019 SWMMWW IF DE-WATERING IS NEEDED

ELEMENT 11: MAINTAIN BMPS

- MAINTAIN AND REPAIR ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION IN ACCORDANCE WITH BMP SPECIFICATIONS.
- REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS WITHIN 30 DAYS AFTER ACHIEVING FINAL SITE STABILIZATION OR AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED.

BMP C160: CERTIFIED EROSION AND SEDIMENT CONTROL LEAD

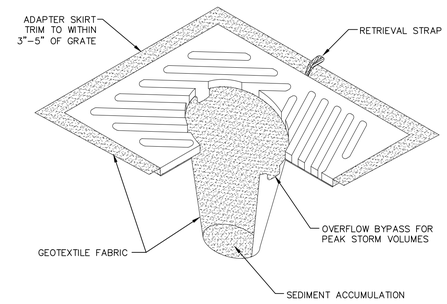
ELEMENT 12: MANAGE THE PROJECT

- PHASE DEVELOPMENT PROJECTS TO THE MAXIMUM DEGREE PRACTICABLE AND TAKE INTO ACCOUNT SEASONAL WORK LIMITATIONS.
- INSPECTION AND MONITORING – INSPECT, MAINTAIN AND REPAIR ALL BMPS AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. PROJECTS REGULATED UNDER THE CONSTRUCTION STORMWATER GENERAL PERMIT MUST CONDUCT SITE INSPECTIONS AND MONITORING IN ACCORDANCE WITH SPECIAL CONDITION S4 OF THE CONSTRUCTION STORMWATER GENERAL PERMIT.
- MAINTAINING AN UPDATED CONSTRUCTION SWPPP – MAINTAIN, UPDATE, AND IMPLEMENT THE SWPPP.
- PROJECTS THAT DISTURB ONE OR MORE ACRES MUST HAVE SITE INSPECTIONS CONDUCTED BY A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL). PROJECT SITES DISTURBING LESS THAN ONE ACRE MAY HAVE A CESCL OR A PERSON WITHOUT CESCL CERTIFICATION CONDUCT INSPECTIONS. BY THE INITIATION OF CONSTRUCTION, THE SWPPP MUST IDENTIFY THE CESCL OR INSPECTOR, WHO MUST BE PRESENT ON-SITE OR ON-CALL AT ALL TIMES.
- THE CESCL OR INSPECTOR (PROJECT SITES LESS THAN ONE ACRE) MUST HAVE THE SKILLS TO ASSESS THE:
  - SITE CONDITIONS AND CONSTRUCTION ACTIVITIES THAT COULD IMPACT THE QUALITY OF STORMWATER.
  - EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES USED TO CONTROL THE QUALITY OF STORMWATER DISCHARGES.
- THE CESCL OR INSPECTOR MUST EXAMINE STORMWATER VISUALLY FOR THE PRESENCE OF SUSPENDED SEDIMENT, TURBIDITY, DISCOLORATION, AND OIL SHEEN. THEY MUST EVALUATE THE EFFECTIVENESS OF BMPS AND DETERMINE IF IT IS NECESSARY TO INSTALL, MAINTAIN, OR REPAIR BMPS TO IMPROVE THE QUALITY OF STORMWATER DISCHARGES. BASED ON THE RESULTS OF THE INSPECTION, CONSTRUCTION SITE OPERATORS MUST CORRECT THE PROBLEMS IDENTIFIED BY:
  - REVIEWING THE SWPPP FOR COMPLIANCE WITH THE 13 CONSTRUCTION SWPPP ELEMENTS AND MAKING APPROPRIATE REVISIONS WITHIN 7 DAYS OF THE INSPECTION.
  - IMMEDIATELY BEGINNING THE PROCESS OF FULLY IMPLEMENTING AND MAINTAINING APPROPRIATE SOURCE CONTROL AND/OR TREATMENT BMPS AS SOON AS POSSIBLE, ADDRESSING THE PROBLEMS NOT LATER THAN WITHIN 10 DAYS OF THE INSPECTION. IF INSTALLATION OF NECESSARY TREATMENT BMPS IS NOT FEASIBLE WITHIN 10 DAYS, THE CONSTRUCTION SITE OPERATOR MAY REQUEST AN EXTENSION WITHIN THE INITIAL 10-DAY RESPONSE PERIOD.
  - DOCUMENTING BMP IMPLEMENTATION AND MAINTENANCE IN THE SITE LOG BOOK (SITES LARGER THAN 1 ACRE).
- THE CESCL OR INSPECTOR MUST INSPECT ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, ALL BMPS, AND ALL STORMWATER DISCHARGE POINTS AT LEAST ONCE EVERY CALENDAR WEEK AND WITHIN 24 HOURS OF ANY DISCHARGE FROM THE SITE. (FOR PURPOSES OF THIS CONDITION, INDIVIDUAL DISCHARGE EVENTS THAT LAST MORE THAN ONE DAY DO NOT REQUIRE DAILY INSPECTIONS. FOR EXAMPLE, IF A STORMWATER POND DISCHARGES CONTINUOUSLY OVER THE COURSE OF A WEEK, ONLY ONE INSPECTION IS REQUIRED THAT WEEK.) THE CESCL OR INSPECTOR MAY REDUCE THE INSPECTION FREQUENCY FOR TEMPORARY STABILIZED, INACTIVE SITES TO ONCE EVERY CALENDAR MONTH.

BMP C160: CERTIFIED EROSION AND SEDIMENT CONTROL LEAD

ELEMENT 13: PROTECT LOW IMPACT DEVELOPMENT BMPS

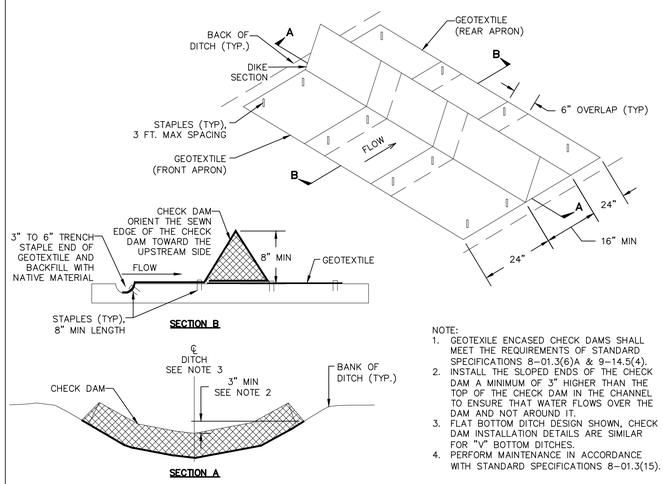
- NOT APPLICABLE; THERE ARE NO EXISITING LOW IMPACT DEVELOPMENT BMPS WITHIN THE PROJECT BOUNDS.



NOTES:
1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING & 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, & RE-INSERTING IT INTO THE CATCH BASIN.

INLET PROTECTION

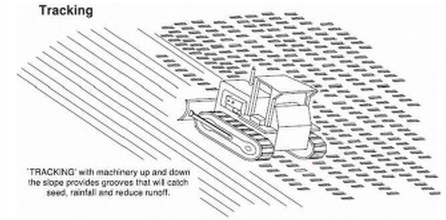
NTS

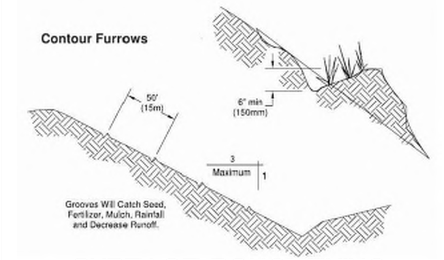


NOTE:
1. GEOTEXILE ENCASED CHECK DAMS SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATIONS 8-01.3(6)A & 9-14.5(4).
2. INSTALL THE SLOPED ENDS OF THE CHECK DAM A MINIMUM OF 3" HIGHER THAN THE TOP OF THE CHECK DAM IN THE CHANNEL TO ENSURE THAT WATER FLOWS OVER THE DAM AND NOT AROUND IT.
3. FLAT BOTTOM DITCH DESIGN SHOWN, CHECK DAM INSTALLATION DETAILS ARE SIMILAR FOR "V" BOTTOM DITCHES.
4. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATIONS 8-01.3(15).

GEOTEXTILE-ENCASED CHECK DAM

NTS





SURFACE ROUGHENING

NTS

60% PLANS	DESIGNED BY TRB DRAWN BY RGS CHECKED BY TRB	R&E Reichhardt & Ebe ENGINEERING INC P.O. Box 978 | 423 Front Street Lynden, WA 98264 (360) 354-3687	NO.	DATE	DESCRIPTION	BY	CITY OF FERNDALE 2095 MAIN ST FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS BARRETT ROAD TO OLD SETTLERS DRIVE TESC DETAILS 1	DWG 22015 DETAILS		DATE 3/29/24
	JOB# 22015	SCALE H: N/A V: N/A	SHEET 8 of 64

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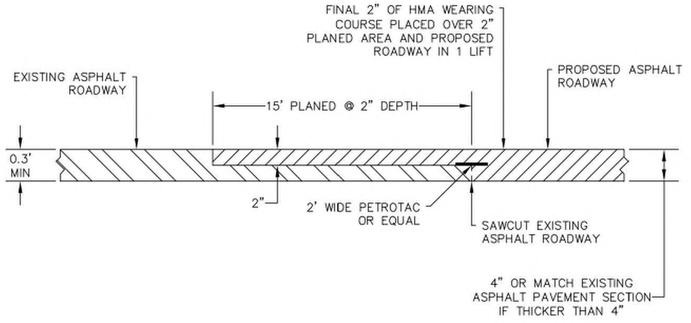
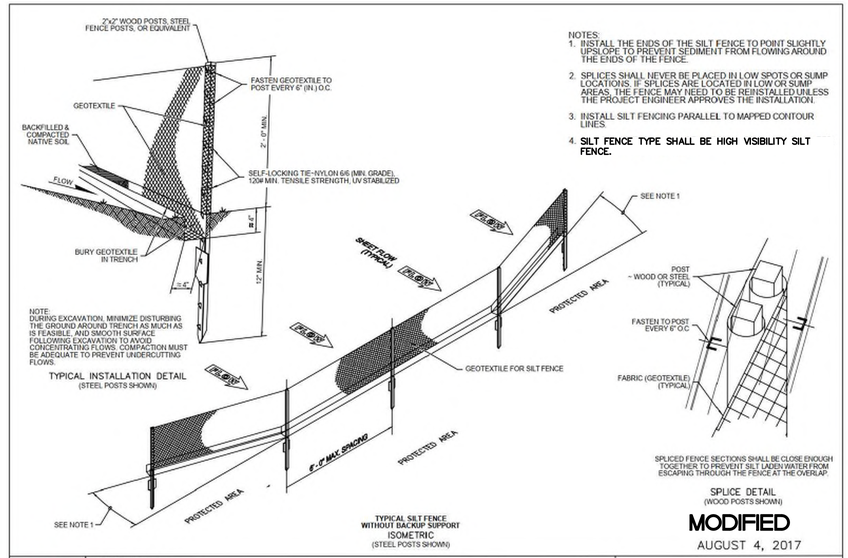


NOVEMBER 25, 2016

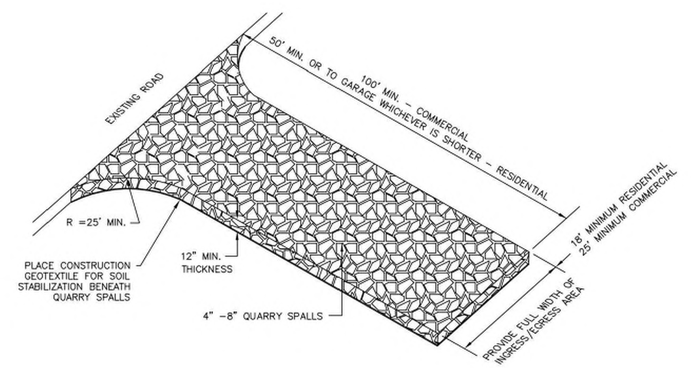
APPROVED		PLANING OF EXISTING AND/OR EXTENDING/REPLACING PAVEMENT SECTIONS STANDARD DETAIL R-3 NOT TO SCALE
Public Works Director	8/11/17 Date	



NOTES:
1. INSTALL THE ENDS OF THE SILT FENCE TO POINT SLIGHTLY UPSLOPE TO PREVENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.
2. SPLICES SHALL NEVER BE PLACED IN LOW SPOTS OR SUMP LOCATIONS. IF SPLICES ARE LOCATED IN LOW OR SUMP AREAS, THE FENCE MAY NEED TO BE REINSTALLED UNLESS THE PROJECT ENGINEER APPROVES THE INSTALLATION.
3. INSTALL SILT FENCING PARALLEL TO MAPPED CONTOUR LINES.
4. **SILT FENCE TYPE SHALL BE HIGH VISIBILITY SILT FENCE.**

MODIFIED
AUGUST 4, 2017

APPROVED		SILT FENCE STANDARD DETAIL ST-27 NOT TO SCALE
Public Works Director	8/11/17 Date	



NOVEMBER 29, 2016

APPROVED		TEMPORARY CONSTRUCTION ENTRANCE STANDARD DETAIL ST-25 NOT TO SCALE
Public Works Director	8/11/17 Date	

TYLER ROSS EIMS — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

60% PLANS

DESIGNED BY TRB
DRAWN BY RGS
CHECKED BY TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
TESC DETAILS 2

DWG 22015 DETAILS
DATE 3/29/24
JOB# 22015
SCALE H: N/A V: N/A
SHEET 9 of 64

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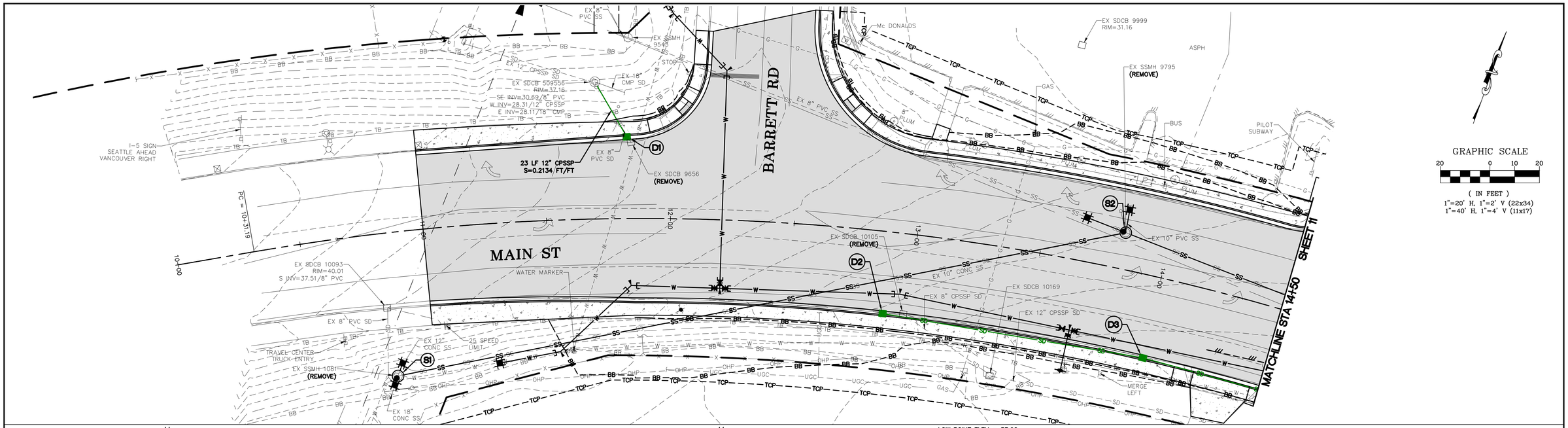


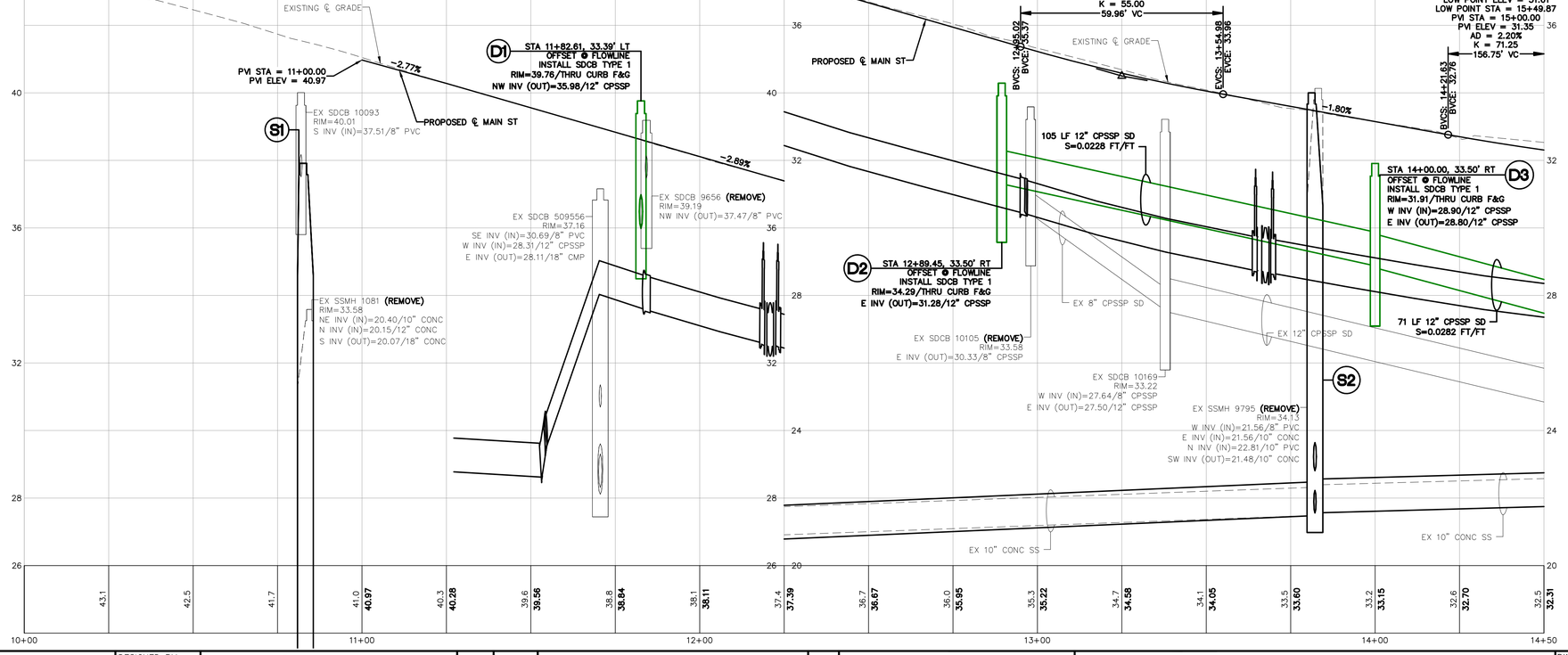
GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)



TYLER ROSS HEBEL
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY TRB
DRAWN BY RGS
CHECKED BY TRB

R&E Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

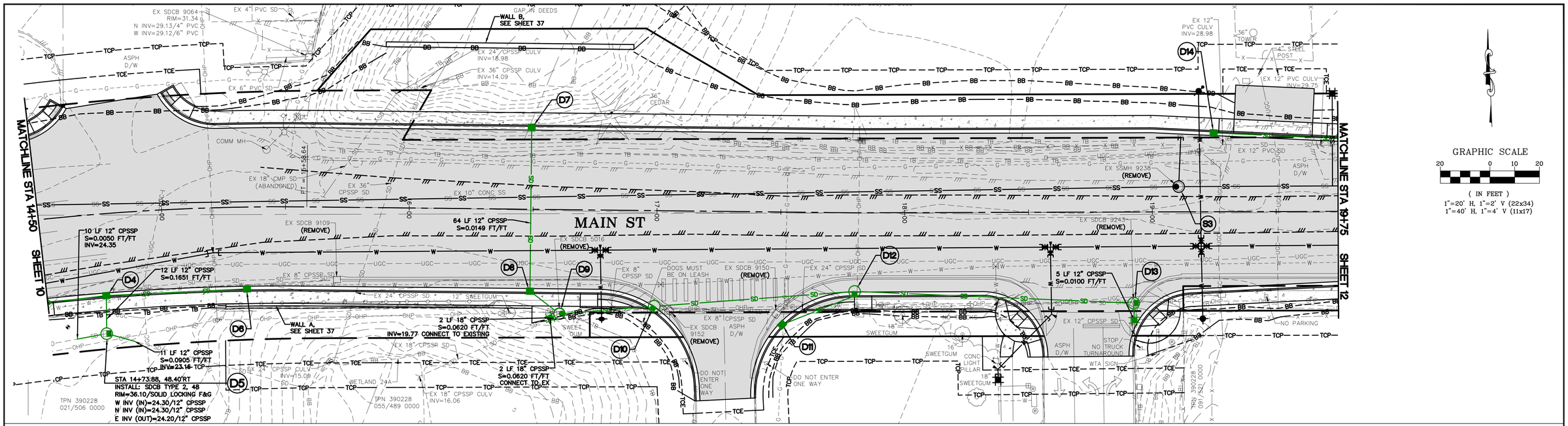
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
ROADWAY AND STORM PLAN - STA 10+00 TO 14+50

DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=20' V: 1"=2'
SHEET 10 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 19 ROADWAY AND STORM PLAN - STA 10+00 TO 14+50, 3/29/2024 3:05:48 PM, , AutoCAD PDF (General Documentation).pc3



GRAPHIC SCALE

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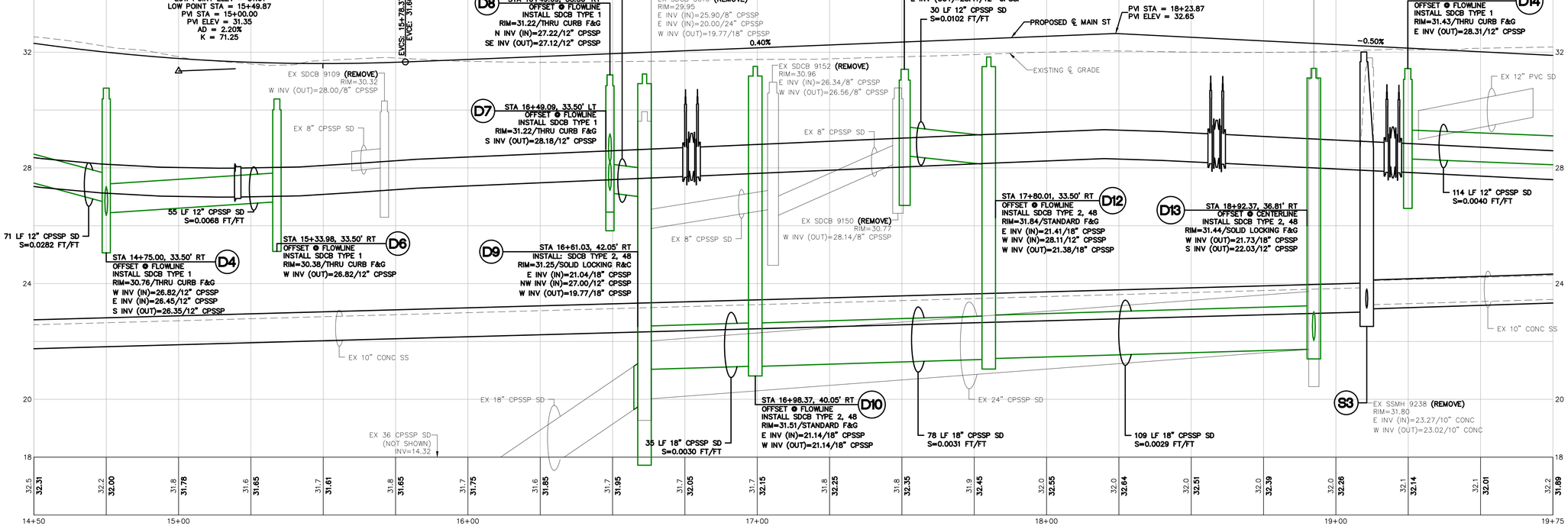
(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)



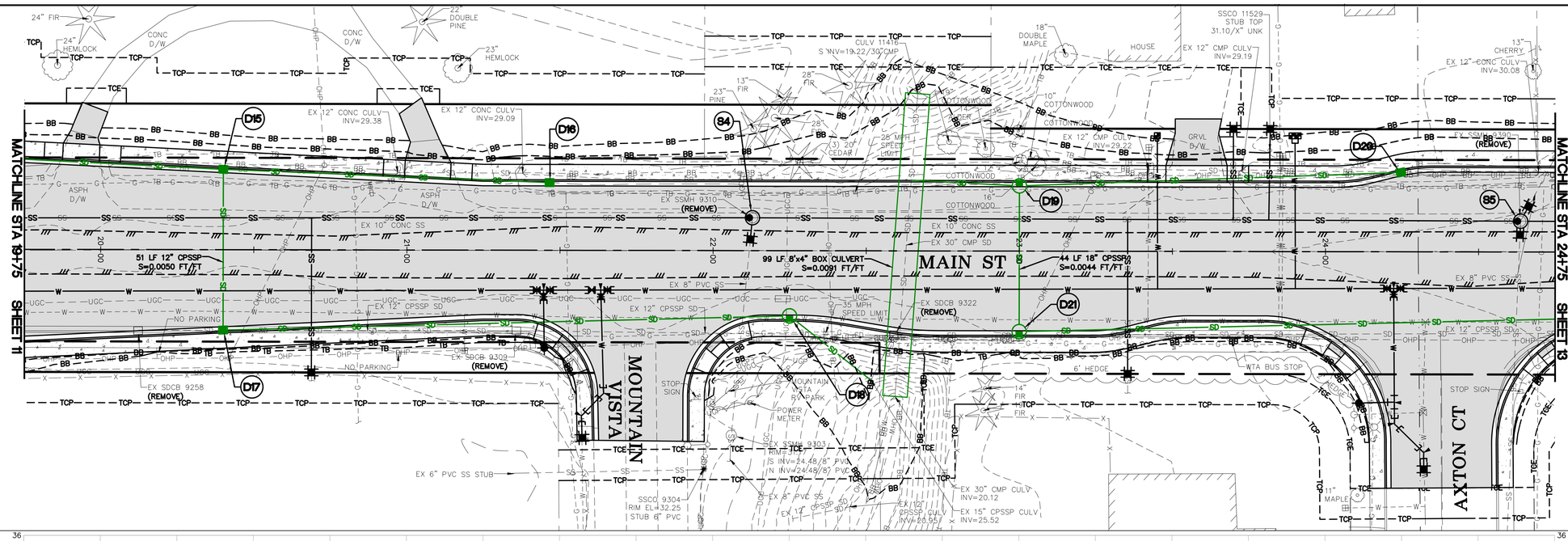
60% PLANS	DESIGNED BY TRB DRAWN BY RGS CHECKED BY TRB	R&E Reichhardt & Ebe ENGINEERING INC P.O. Box 978 | 423 Front Street Lynden, WA 98264 (360) 354-3687	NO.	DATE	DESCRIPTION	BY	CITY OF FERNDALE 2095 MAIN ST FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
ROADWAY AND STORM PLAN - STA 14+50 TO 19+75

DWG	DATE
22015 PLOT	3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'
	SHEET 11 of 64

TYLER ROSS EBEL STATE OF WASHINGTON 56224 REGISTERED PROFESSIONAL ENGINEER

P:\Projects\2015\Civil 3D 2021\2015 PLOT.dwg, 11 ROADWAY AND STORM PLAN - STA 14+50 TO 19+75, 3/29/2024 3:06:29 PM, , AutoCAD PDF (General Documentation).pc3



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(IN FEET)

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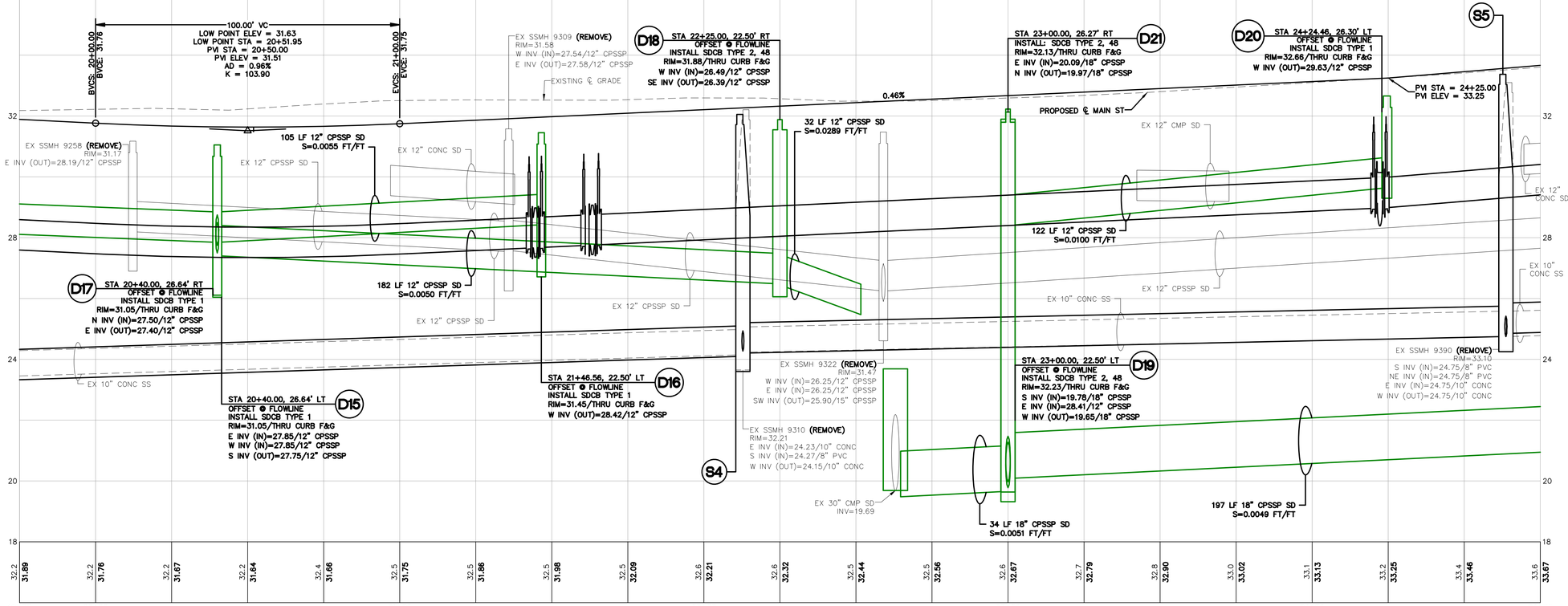
1"=40' H, 1"=4' V (11x17)



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PRELIMINARY

60% PLANS

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R&E Reichhardt & Ebe ENGINEERING INC
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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
ROADWAY AND STORM PLAN - STA 19+75 TO 24+75

DWG 22015 PLOT		DATE	3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'	SHEET	12 of 64

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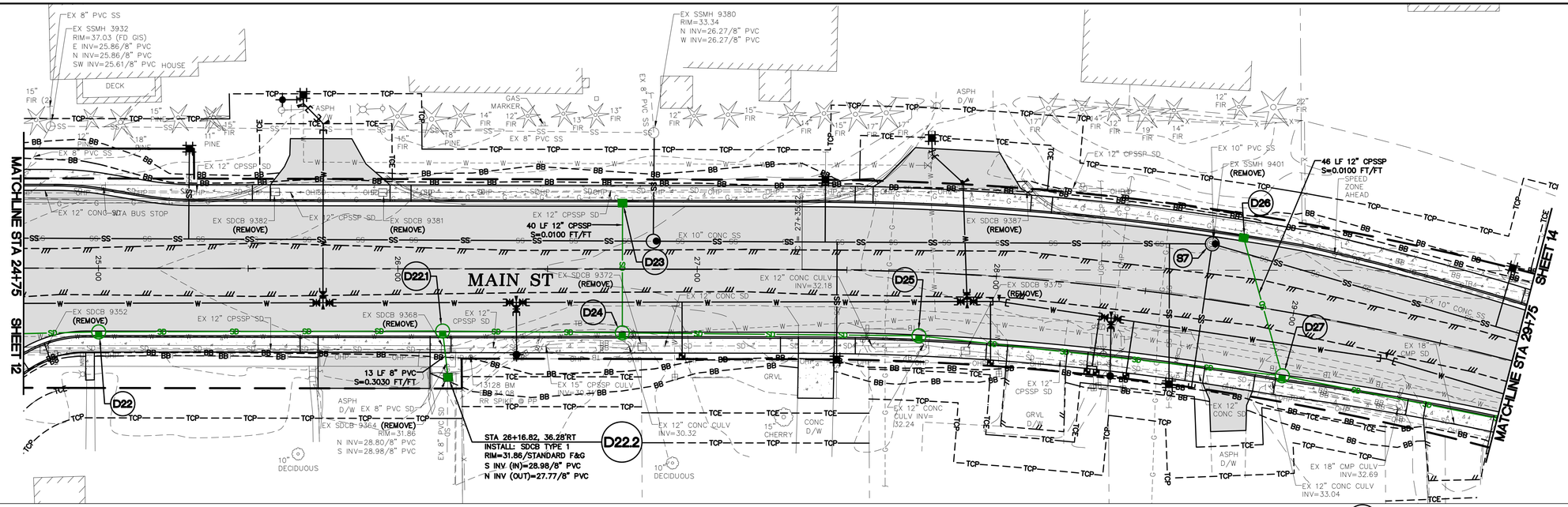

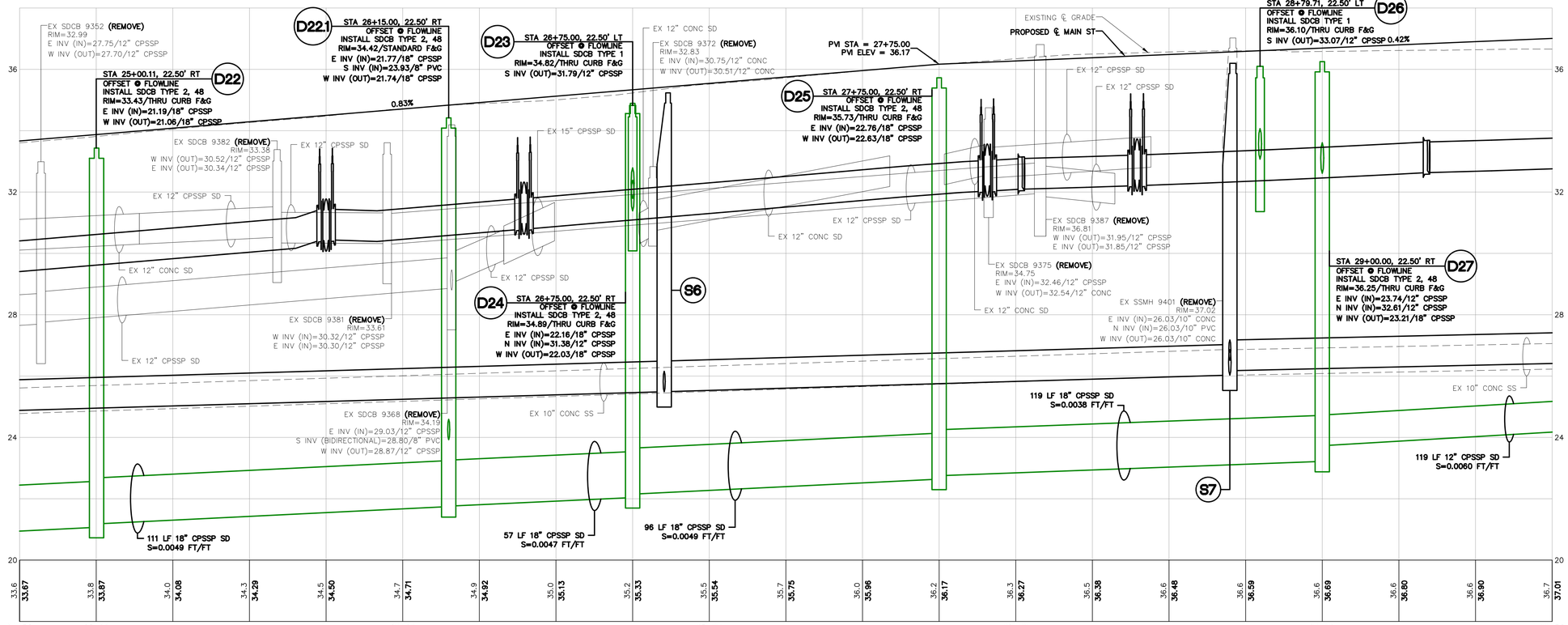

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CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
ROADWAY AND STORM PLAN - STA 24+75 TO 29+75

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'		SHEET 13 of 64

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STATE OF WASHINGTON
56224
REGISTERED PROFESSIONAL ENGINEER
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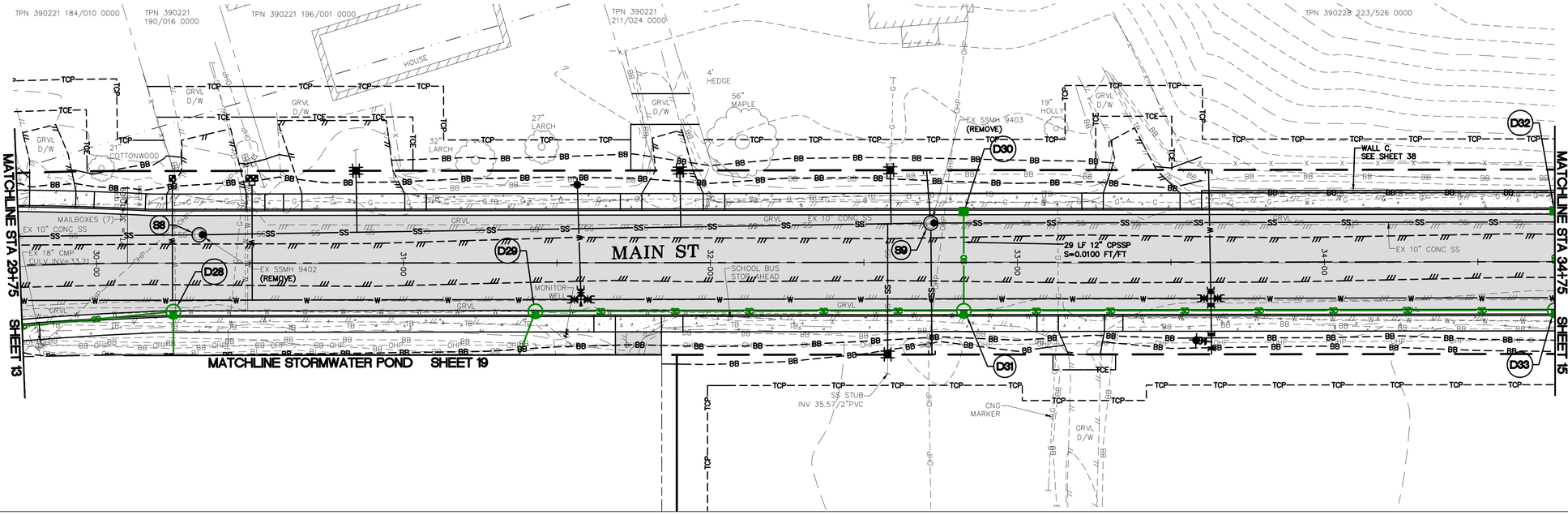
P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 13 ROADWAY AND STORM PLAN - STA 24+75 TO 29+75, 3/29/2024 3:07:59 PM, AutoCAD PDF (General Documentation).pc3



GRAPHIC SCALE

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(IN FEET)

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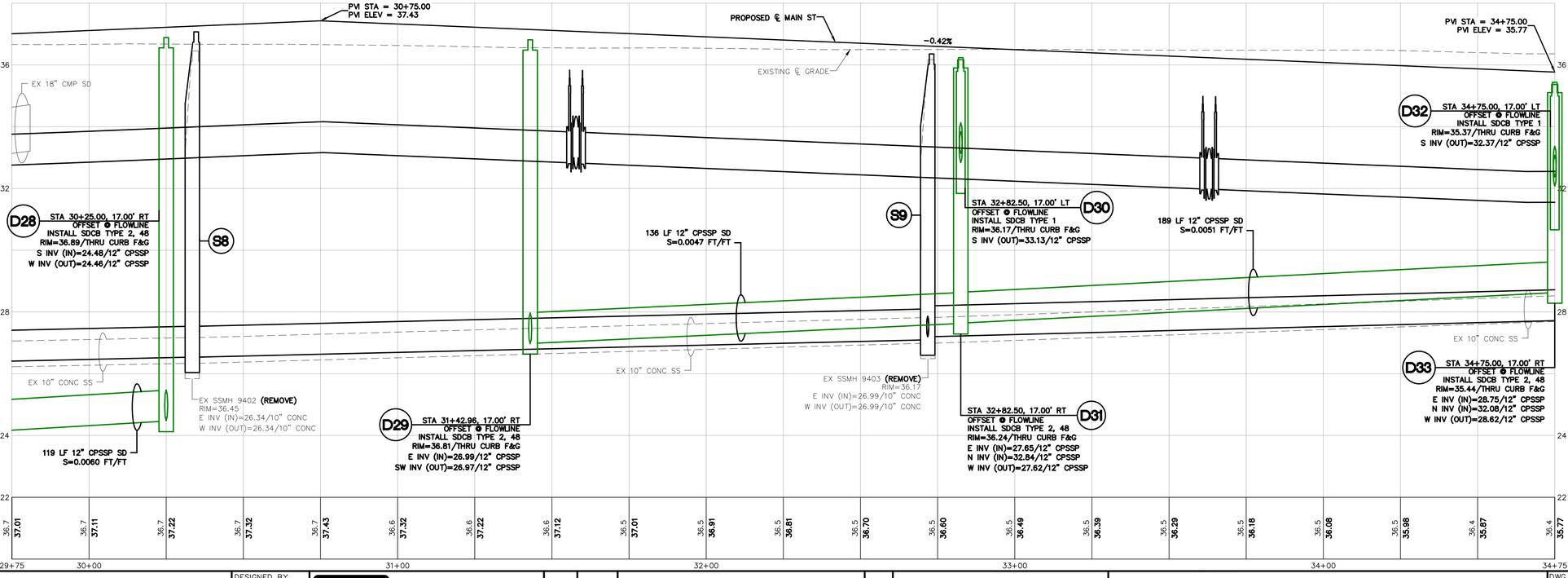
1"=40' H, 1"=4' V (11x17)



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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
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FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
ROADWAY AND STORM PLAN - STA 29+75 TO 34+75

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'		SHEET 14 of 64

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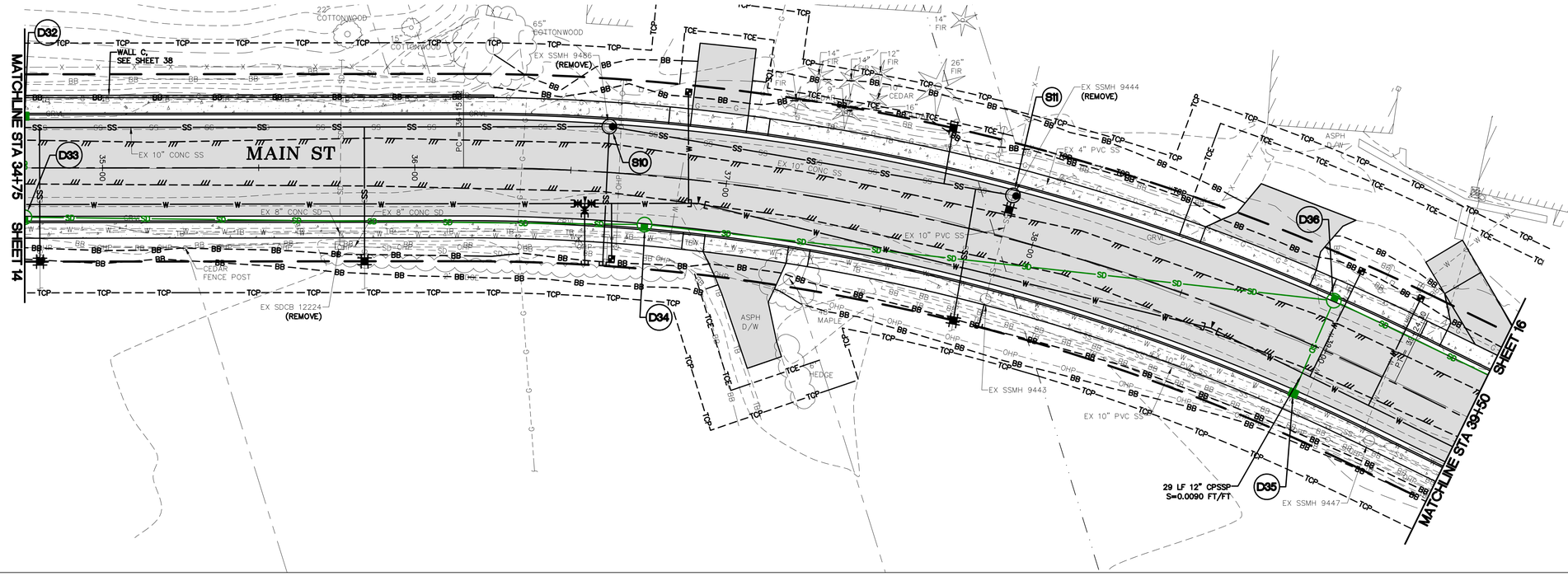

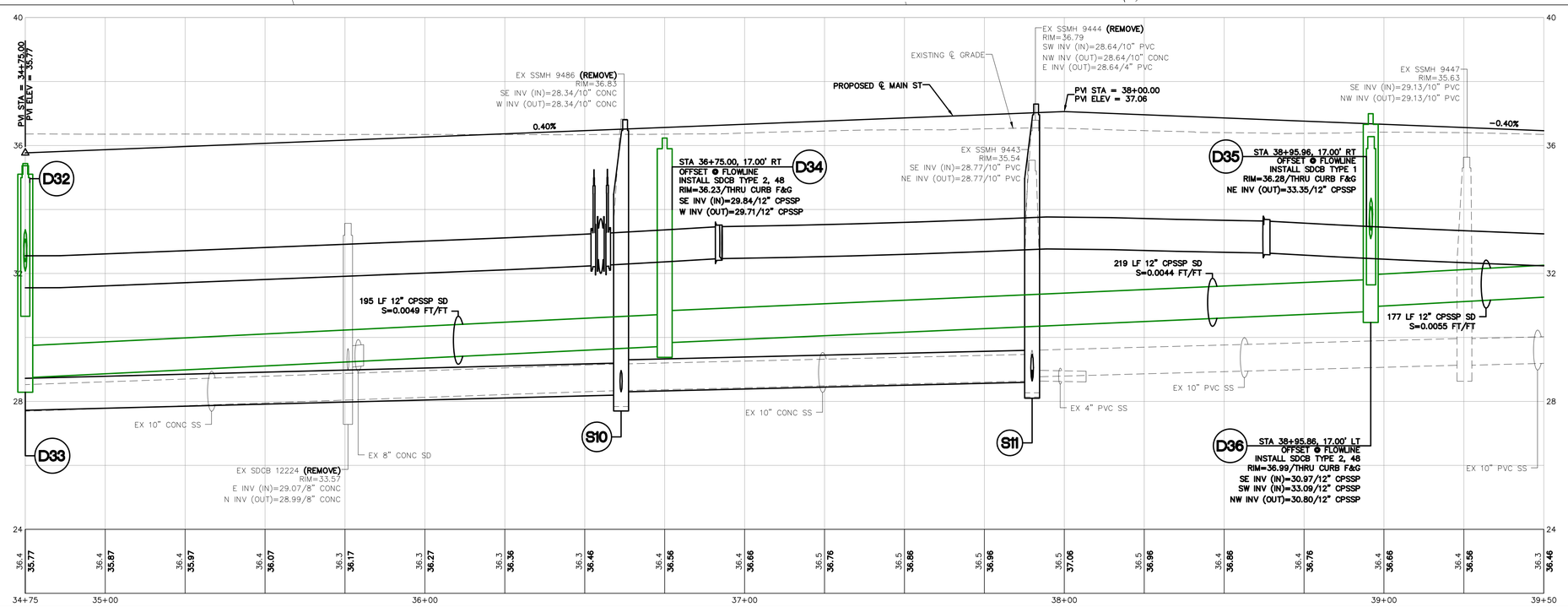

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PROFESSIONAL ENGINEER

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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
ROADWAY AND STORM PLAN - STA 34+75 TO 39+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'		SHEET 15 of 64

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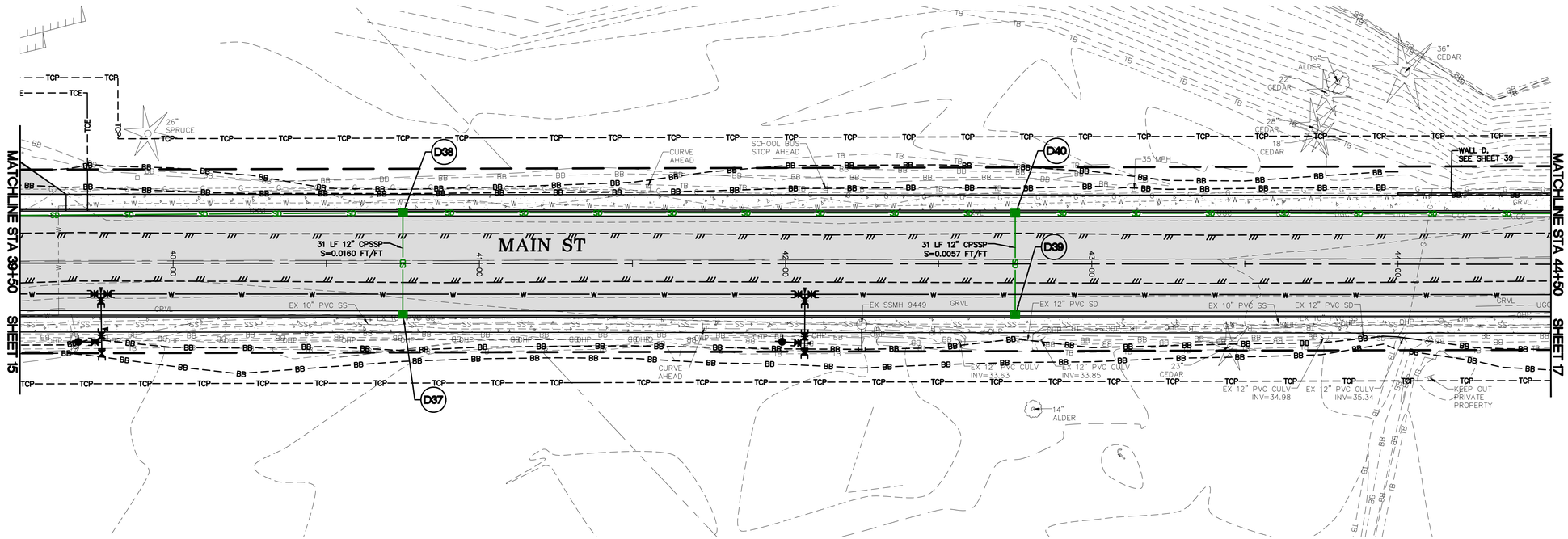

GRAPHIC SCALE

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(IN FEET)
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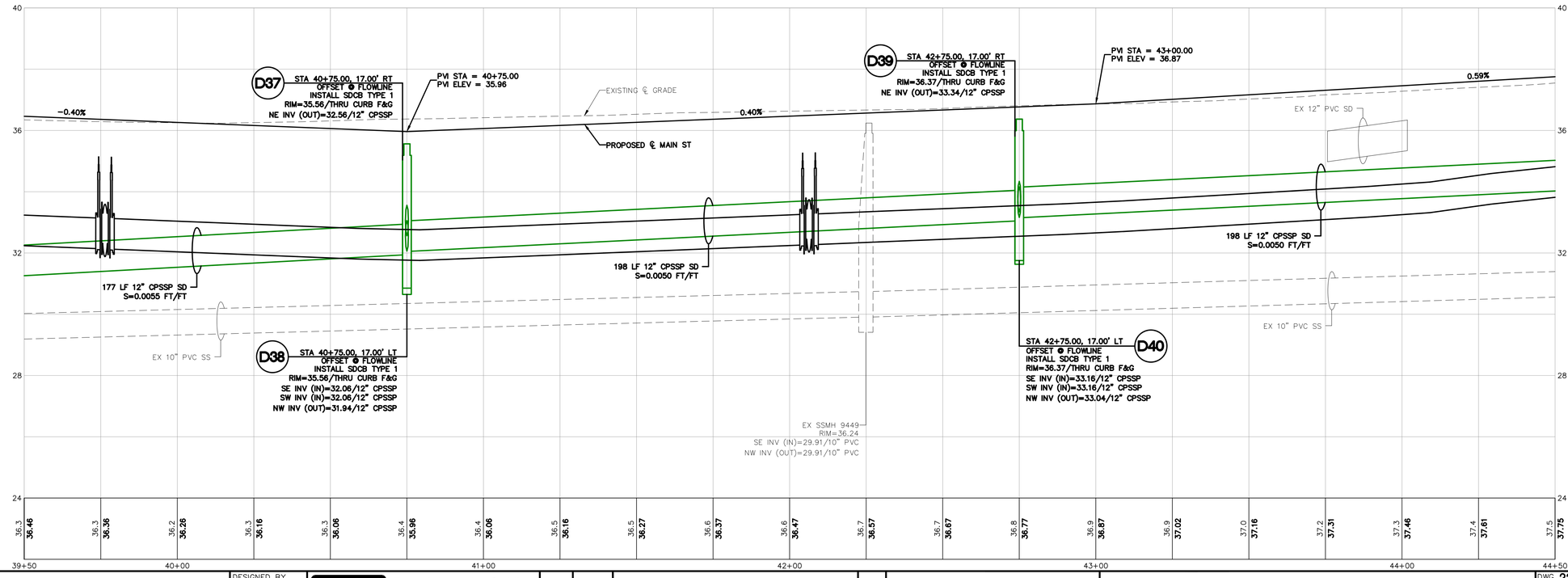
1"=40' H, 1"=4' V (11x17)



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56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
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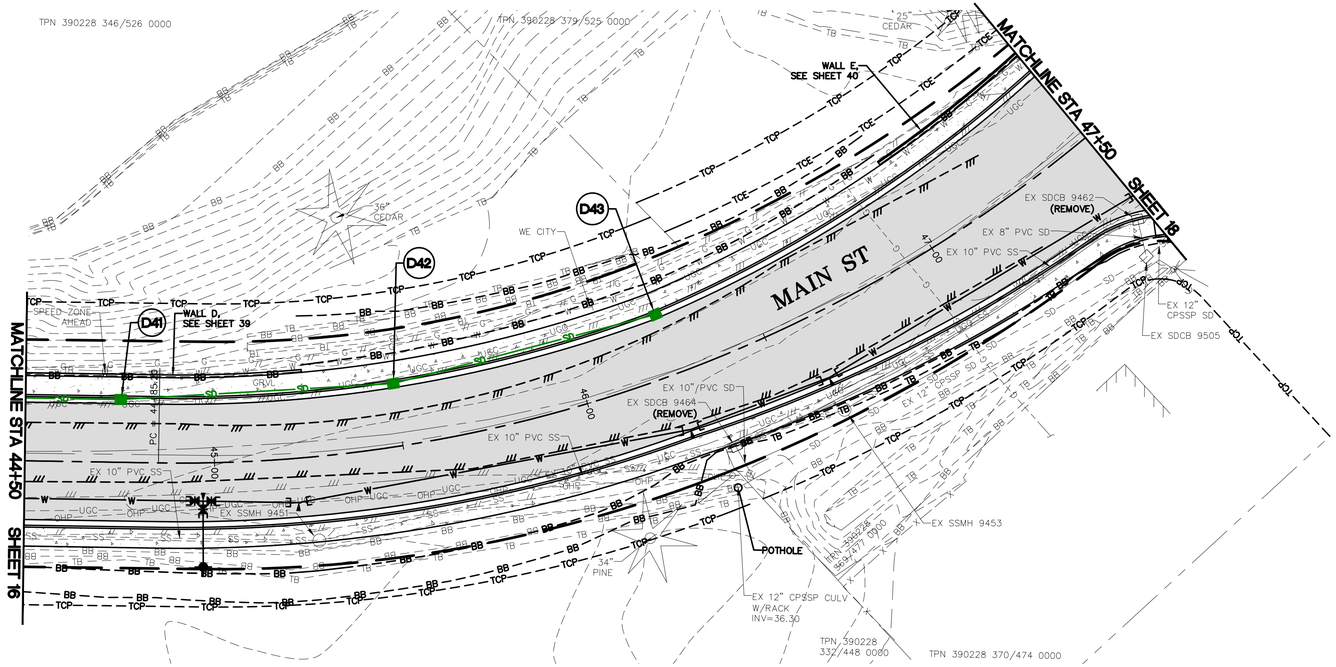
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
ROADWAY AND STORM PLAN - STA 39+50 TO 44+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'		SHEET 16 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg 16 ROADWAY AND STORM PLAN - STA 39+50 TO 44+50, 3/29/2024 3:10:04 PM, , AutoCAD PDF (General Documentation).pc3



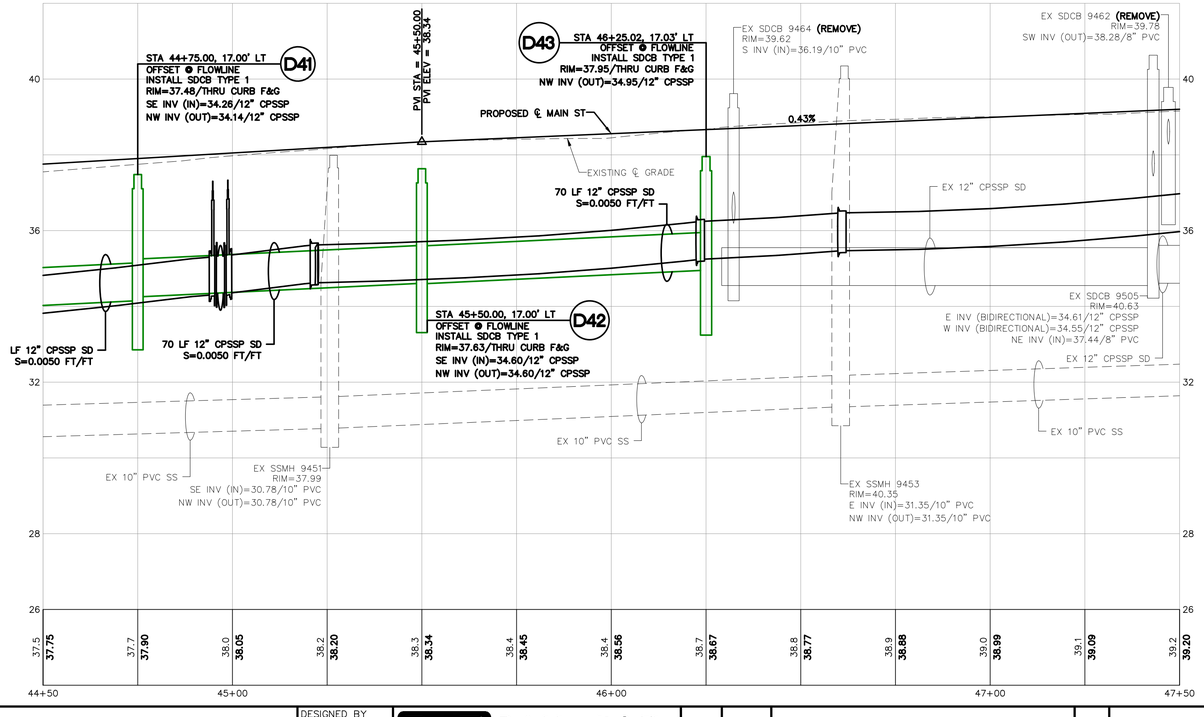
GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)
1"=40' H, 1"=4' V (11x17)

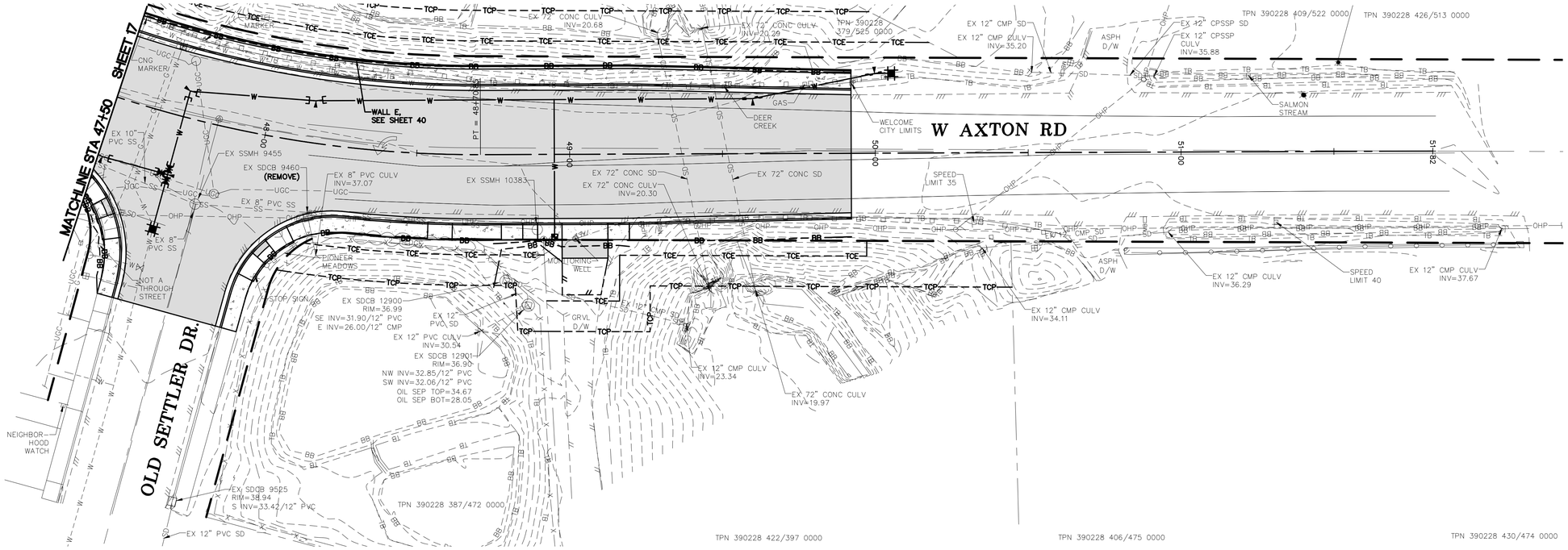
NOTE:
1. CONTRACTOR TO POTHOLE AT EACH SPECIFIED LOCATION 5 DAYS PRIOR TO PLANNED INSTALLATION TO VERIFY FITTINGS.



TILLER ROSS HEIL
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS	DESIGNED BY TRB DRAWN BY RGS CHECKED BY TRB	R&E Reichhardt & Ebe ENGINEERING INC P.O. Box 978 | 423 Front Street Lynden, WA 98264 (360) 354-3687	NO.	DATE	DESCRIPTION	BY	CITY OF FERNDALE 2095 MAIN ST FERNDALE, WA 98248	MAIN STREET IMPROVEMENTS BARRETT ROAD TO OLD SETTLERS DRIVE ROADWAY AND STORM PLAN - STA 44+50 TO 47+50	DWG 22015 PLOT JOB# 22015 SCALE H: 1"=20' V: 1"=2' DATE 3/29/24 SHEET 17 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 17 ROADWAY AND STORM PLAN - STA 44+50 TO 47+50, 3/29/2024 3:19:53 PM, , AutoCAD PDF (General Documentation).pc3



GRAPHIC SCALE

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(IN FEET)

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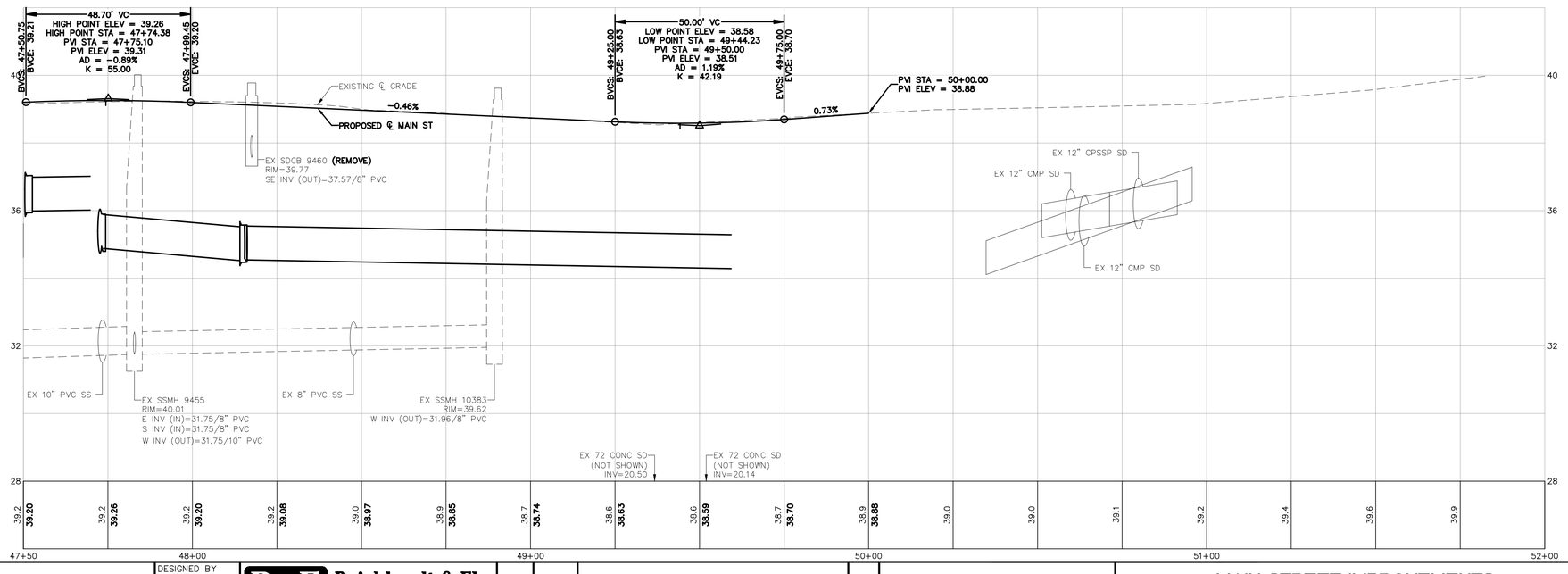
1"=40' H, 1"=4' V (11x17)



60% PLANS

DESIGNED BY	TRB
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CHECKED BY	TRB

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P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

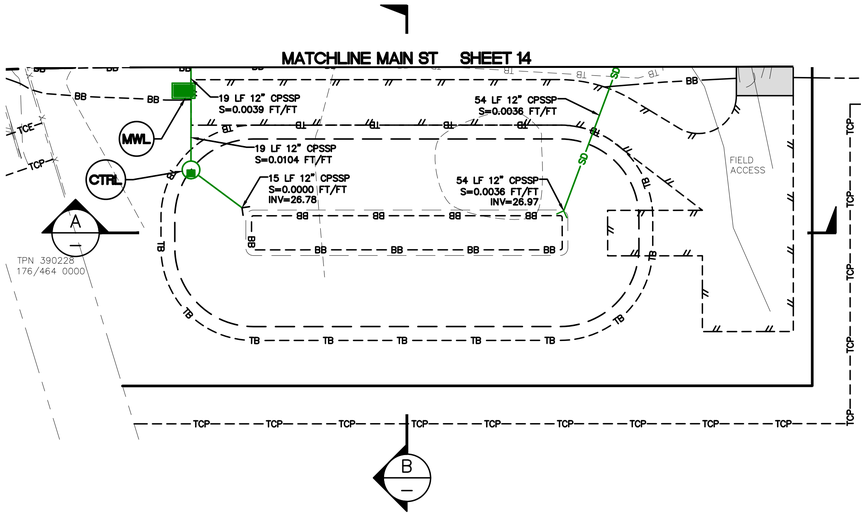
MAIN STREET IMPROVEMENTS

BARRETT ROAD TO OLD SETTLERS DRIVE

ROADWAY AND STORM PLAN - STA 47+50 TO 52+00

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: 1"=2'	SHEET 18 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg - 18 ROADWAY AND STORM PLAN - STA 47+50 TO 52+00, 3/29/2024 3:11:44 PM, , AutoCAD PDF (General Documentation).pc3



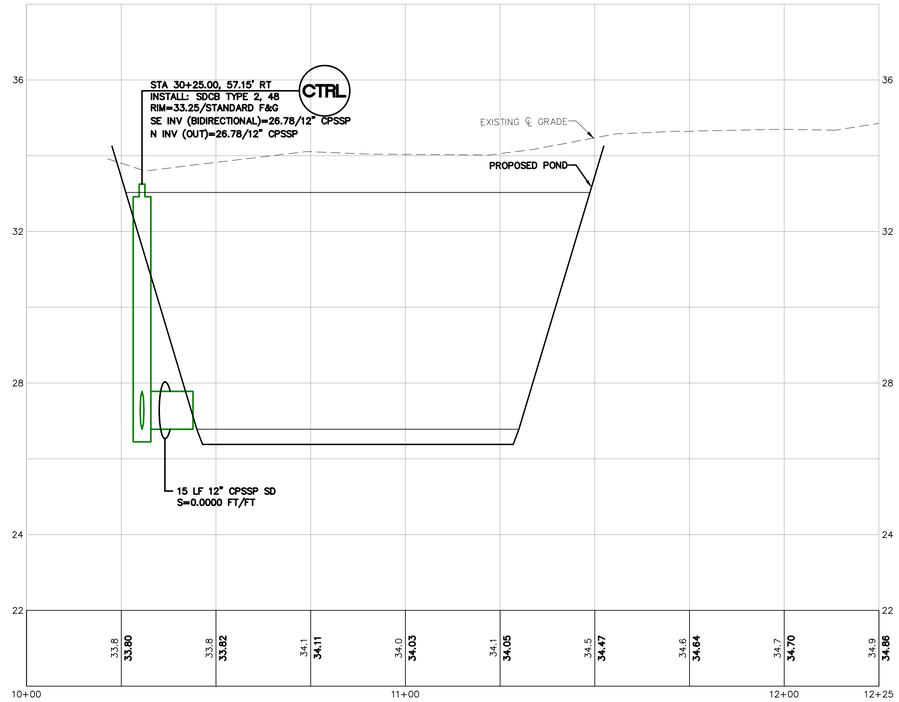
PLAN VIEW

STA 30+25.03, 36.28'RT
INSTALL: MODULAR WETLAND
RIM=34.25/STANDARD
S INV (IN)=26.58/12" CPSSP
N INV (OUT)=24.55/12" CPSSP

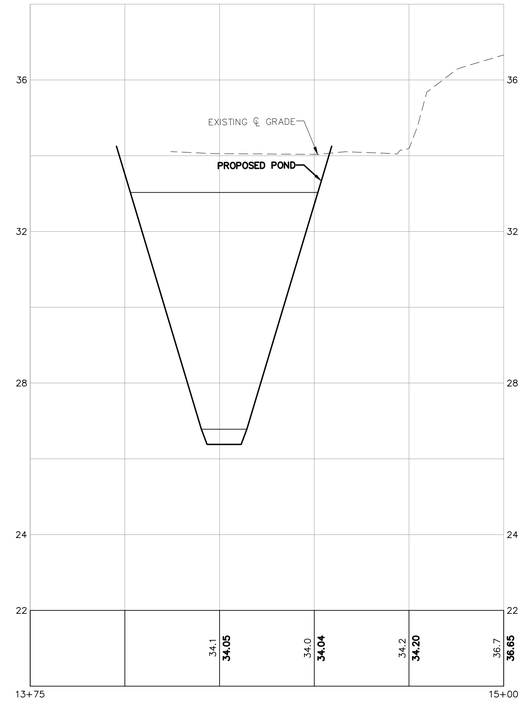
GRAPHIC SCALE

20 0 10 20

(IN FEET)
1"=20' H, 1"=2' V (22x34)
1"=40' H, 1"=4' V (11x17)



SECTION A



SECTION B

TILLER ROSS EBE
STATE OF WASHINGTON
56224
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PROFESSIONAL ENGINEER

60% PLANS

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P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

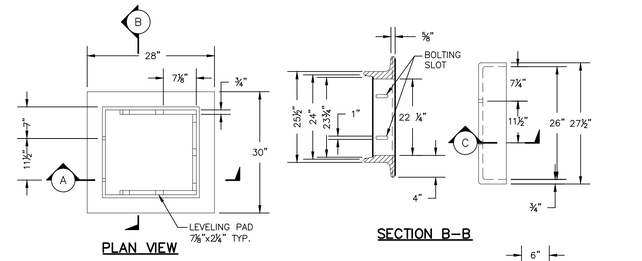
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
STORMWATER POND

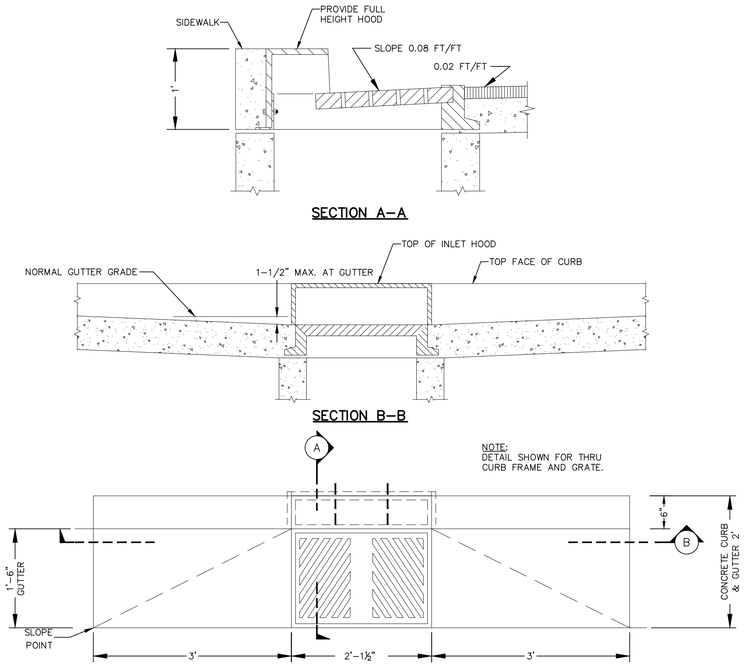
DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=20' V: 1"=2'
SHEET 19 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg - I9 STORMWATER POND, 3/29/2024 1:12:38 PM _ AutoCAD PDF (General Documentation).pc3



THRU CURB FRAME

NTS

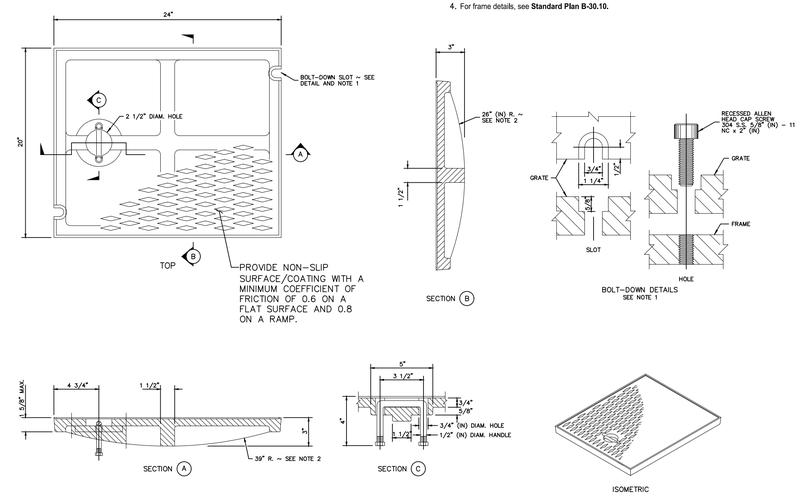


CURB AND GUTTER AT CATCH BASIN

NTS

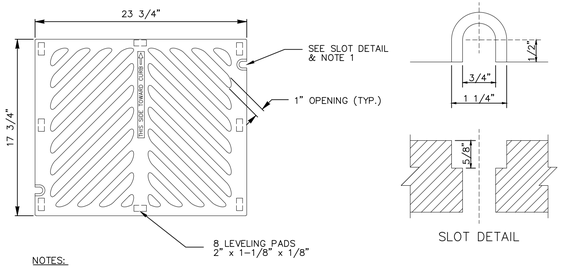
NOTES:

1. Bolt–down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) – 11 NC × 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt–down holes varies by manufacturer.
2. Alternative reinforcing designs are acceptable in lieu of the rib design.
3. Refer to **Standard Specification Section 9-05.15** and **9-05.15(2)** for additional requirements.
4. For frame details, see **Standard Plan B-30.10.**



RECTANGULAR SOLID METAL COVER

NTS

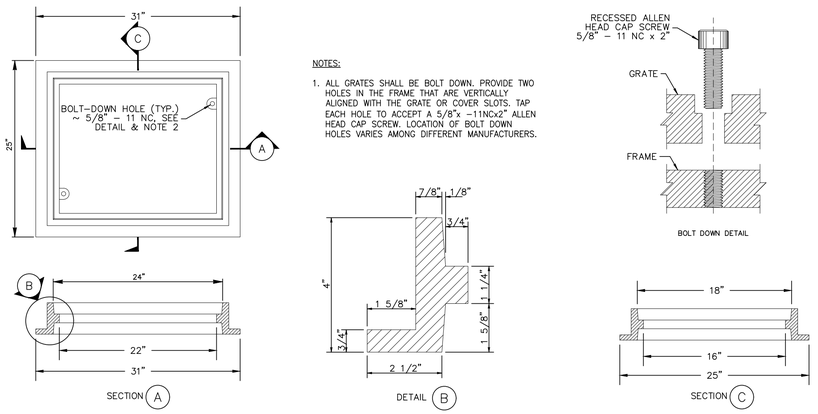


NOTES:

1. ALL GRATES SHALL BE BOLT DOWN. PROVIDE TWO SLOTS IN THE GRATE THAT ARE VERTICALLY ALIGNED WITH THE HOLES IN THE FRAME. LOCATION OF BOLT DOWN SLOTS VARIES AMONG DIFFERENT MANUFACTURERS.
2. THE THICKNESS OF THE GRATE SHALL NOT EXCEED 1–5/8".

HERRINGBONE GRATE

NTS



STANDARD FRAME

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MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
STORM DETAILS 1

DWG 22015 DETAILS		DATE 3/29/24
JOB# 22015	SCALE H: N/A V: N/A	SHEET 20 of 64

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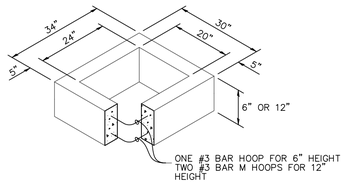
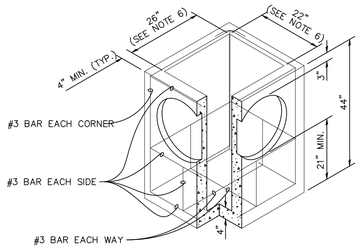
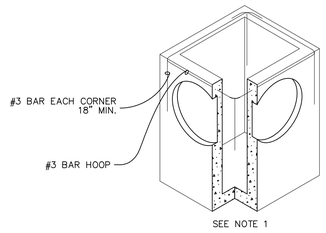
P:\Projects\22015\Civil 3D 2021\2015 DETAILS.dwg, 20 STORM DETAILS 1, 3/29/2024 3:13:15 PM, AutoCAD PDF (General Documentation).pc3

NOTES

1. AS ACCEPTABLE ALTERNATIVES TO THE REBAR SHOWN IN THE PRECAST BASE SECTION, FIBERS (PLACED ACCORDING TO THE STANDARD SPECIFICATIONS), OR WIRE MESH HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT SHALL BE USED WITH THE MINIMUM REQUIRED REBAR SHOWN IN THE ALTERNATIVE PRECAST BASE SECTION. WIRE MESH SHALL NOT BE PLACED IN THE KNOCKOUTS.
2. THE KNOCKOUT DIAMETER SHALL NOT BE GREATER THAN 20". KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STANDARD SPECIFICATION 9-04.3.
3. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE LOWEST PIPE INVERT SHALL BE 5'.
4. THE FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE UP OR DOWN. THE FRAME MAY BE CAST INTO THE ADJUSTMENT SECTION.
5. THE PRECAST BASE SECTION MAY HAVE A ROUNDED FLOOR, AND THE WALLS MAY BE SLOPED AT A RATE OF 1:24 OR STEEPER.
6. THE OPENING SHALL BE MEASURED AT THE TOP OF THE PRECAST BASE SECTION.
7. ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BASIN HAS BEEN PLACED.

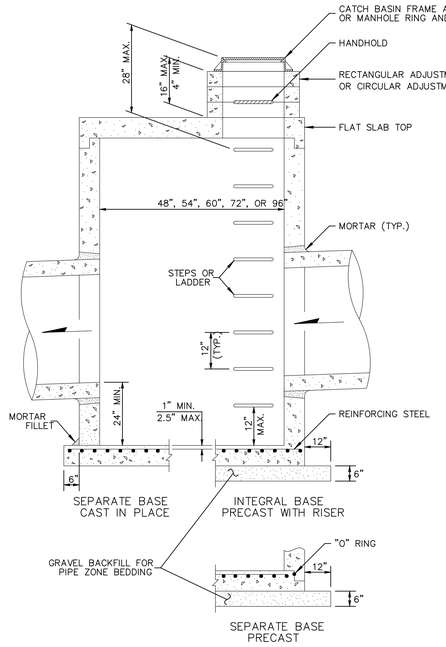






CATCH BASIN TYPE 1

NTS



NOTES

1. NO STEPS ARE REQUIRED WHEN HEIGHT IS 4' OR LESS.
2. THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE SLOPED TO FACILITATE CLEANING.
3. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO ADJUSTMENT SECTION.
4. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STD. SPEC. 9-04.3.

CATCH BASIN DIMENSIONS						
CATCH BASIN DIAMETER	WALL THICKNESS	BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS	BASE REINFORCING STEEL IN ^{2}/FT IN EACH DIRECTION	
					INTEGRAL	SEPARATE
48"	4"	6"	36"	8"	0.15	0.23
54"	4.5"	8"	42"	8"	0.19	0.19

PIPE ALLOWANCES						
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER					
	CONCRETE	ALL METAL	CPSSP ①	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"

① CORRUGATED POLYETHYLENE STORM SEWER PIPE (STD. SPEC. 9-05.20)
② (STD. SPEC. 9-05.12(1))
③ (STD. SPEC. 9-05.12(2))

STORM DRAIN CATCH BASIN, TYPE 2

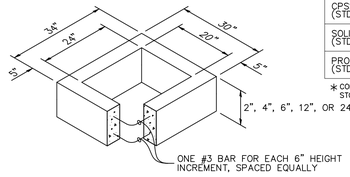
NTS

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSSP * (STD. SPEC. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	21"

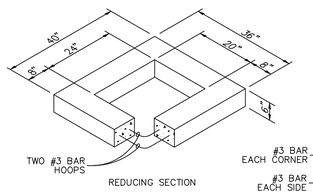
* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

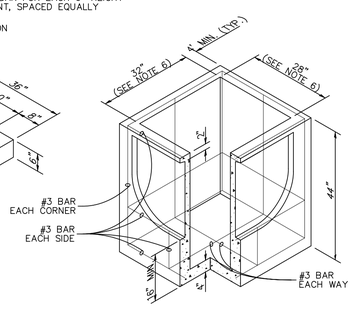
1. AS ACCEPTABLE ALTERNATIVES TO THE REBAR SHOWN IN THE PRECAST BASE SECTION, FIBERS (PLACED ACCORDING TO THE STANDARD SPECIFICATIONS), OR WIRE MESH HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT, SHALL BE USED WITH THE MINIMUM REQUIRED REBAR SHOWN IN THE ALTERNATIVE PRECAST BASE SECTION. WIRE MESH SHALL NOT BE PLACED IN THE KNOCKOUTS.
2. THE KNOCKOUT SHALL NOT BE GREATER THAN 26", IN ANY DIRECTION. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STANDARD SPECIFICATION 9-04.3.
3. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE LOWEST PIPE INVERT SHALL BE 5'.
4. THE FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE DOWN OR INTEGRALLY CAST INTO THE ADJUSTMENT SECTION WITH FLANGE UP.
5. THE PRECAST BASE SECTION MAY HAVE A ROUNDED FLOOR, AND THE WALLS MAY BE SLOPED AT A RATE OF 1:24 OR STEEPER.
6. THE OPENING SHALL BE MEASURED AT THE TOP OF THE PRECAST BASE SECTION.
7. ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BASIN HAS BEEN PLACED.



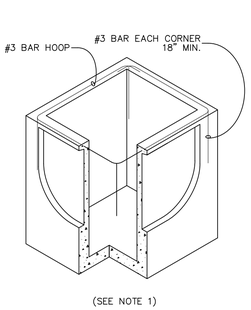
RECTANGULAR ADJUSTMENT SECTION



REDUCING SECTION



PRECAST BASE SECTION



(SEE NOTE 1)
ALTERNATIVE PRECAST BASE SECTION

CATCH BASIN TYPE 1L

NTS

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSSP * (STD. SPEC. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	21"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

1. AS ACCEPTABLE ALTERNATIVES TO THE REBAR SHOWN IN THE PRECAST BASE SECTION, FIBERS (PLACED ACCORDING TO THE STANDARD SPECIFICATIONS), OR WIRE MESH HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT, SHALL BE USED WITH THE MINIMUM REQUIRED REBAR SHOWN IN THE ALTERNATIVE PRECAST BASE SECTION. WIRE MESH SHALL NOT BE PLACED IN THE KNOCKOUTS.
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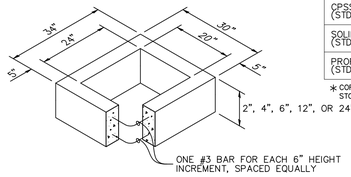
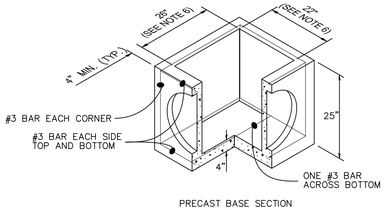
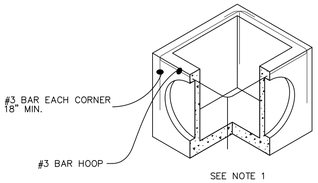


RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION



SEE NOTE 1
ALTERNATIVE PRECAST BASE SECTION

CONCRETE INLET

NTS

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STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY TRB
DRAWN BY RGS
CHECKED BY TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
STORM DETAILS 2

DWG 22015 DETAILS
DATE 3/29/24
JOB# 22015
SCALE H: N/A V: N/A
SHEET 21 of 64

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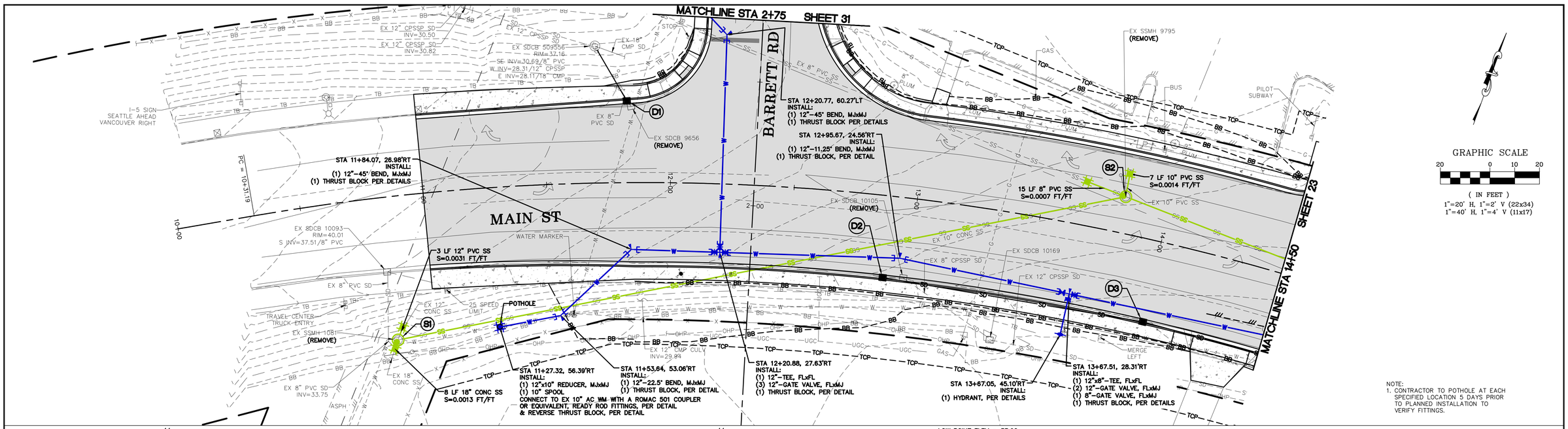

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TRB	RGS	TRB

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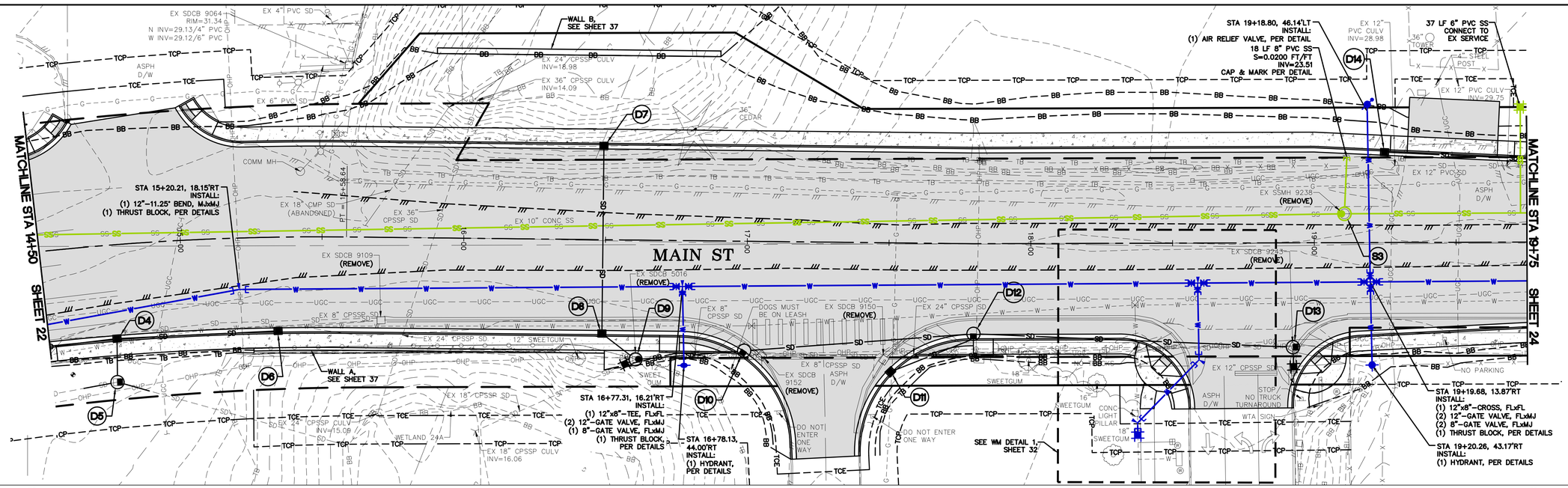
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SANITARY SEWER AND WATER PLAN - STA 10+00 TO 14+50

DWG	DATE
22015 PLOT	3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'
	SHEET 22 of 64

P:\Projects\2201\Civil 3D 2021\2015 PLOT.dwg, 22 SANITARY SEWER AND WATER PLAN - STA 10+00 TO 14+50, 3/29/2024 3:14:47 PM, , AutoCAD PDF (General Documentation).pc3



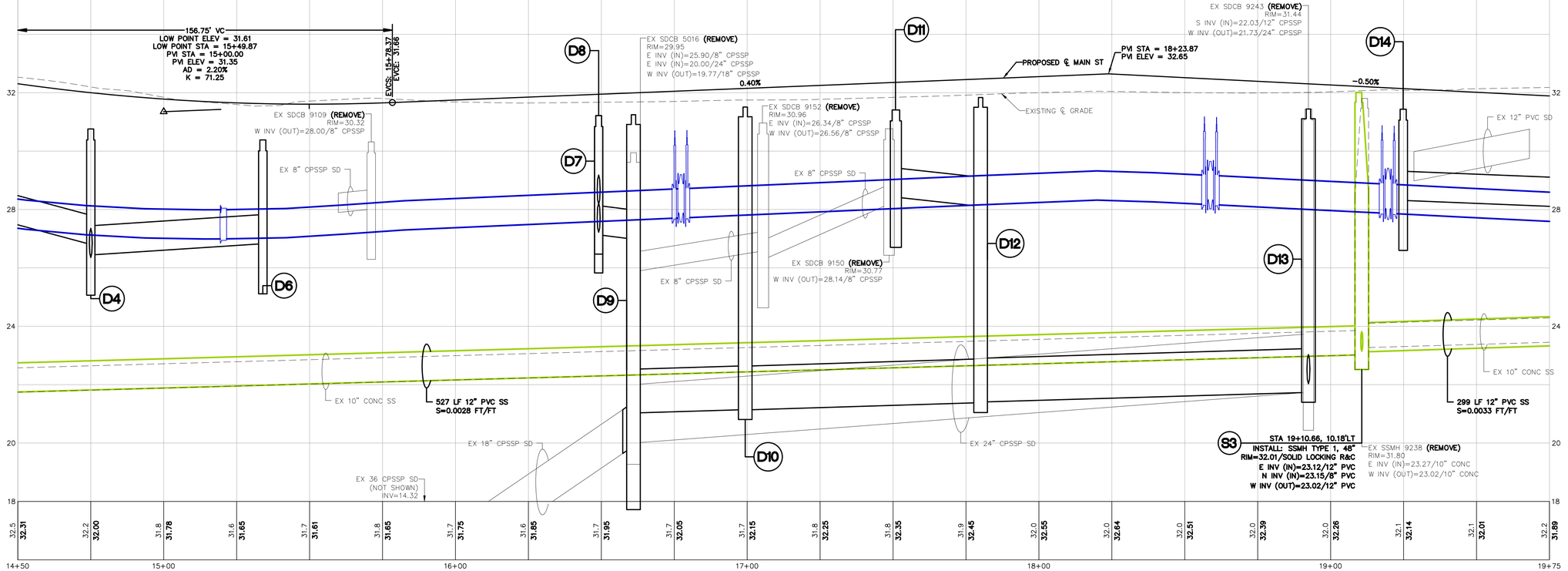
GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)



TYLER ROSS EBBE
STATE OF WASHINGTON
56224
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PROFESSIONAL ENGINEER

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ENGINEERING INC
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Lynden, WA 98264 (360) 354-3687

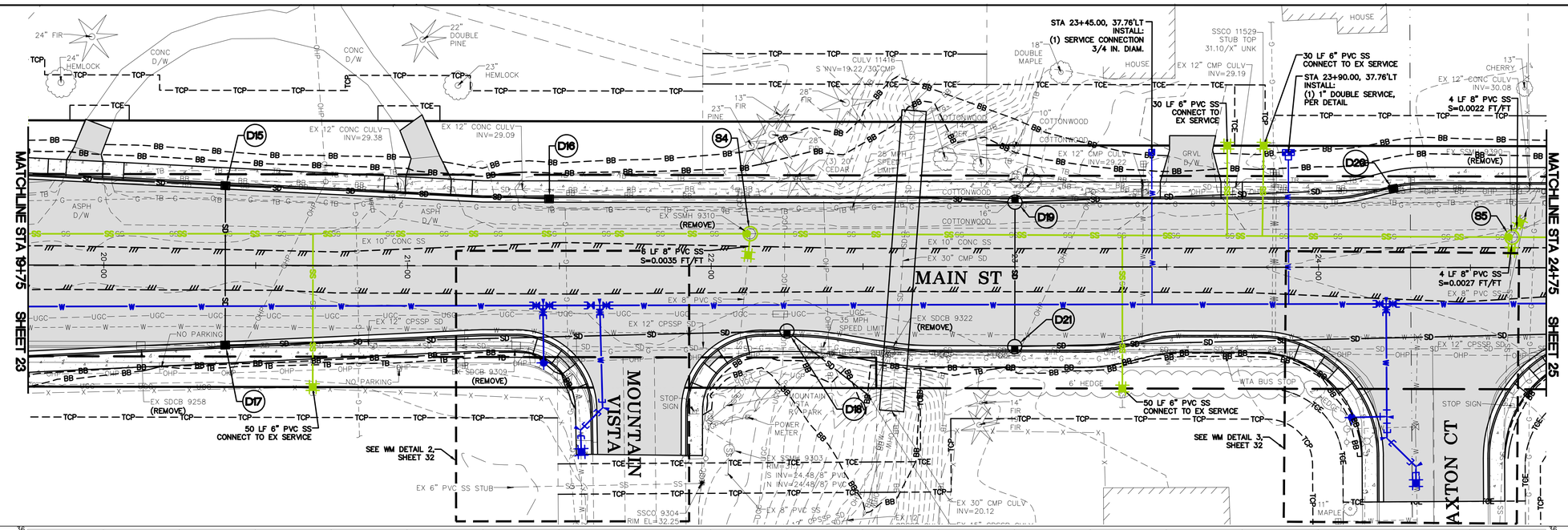
NO.	DATE	DESCRIPTION	BY

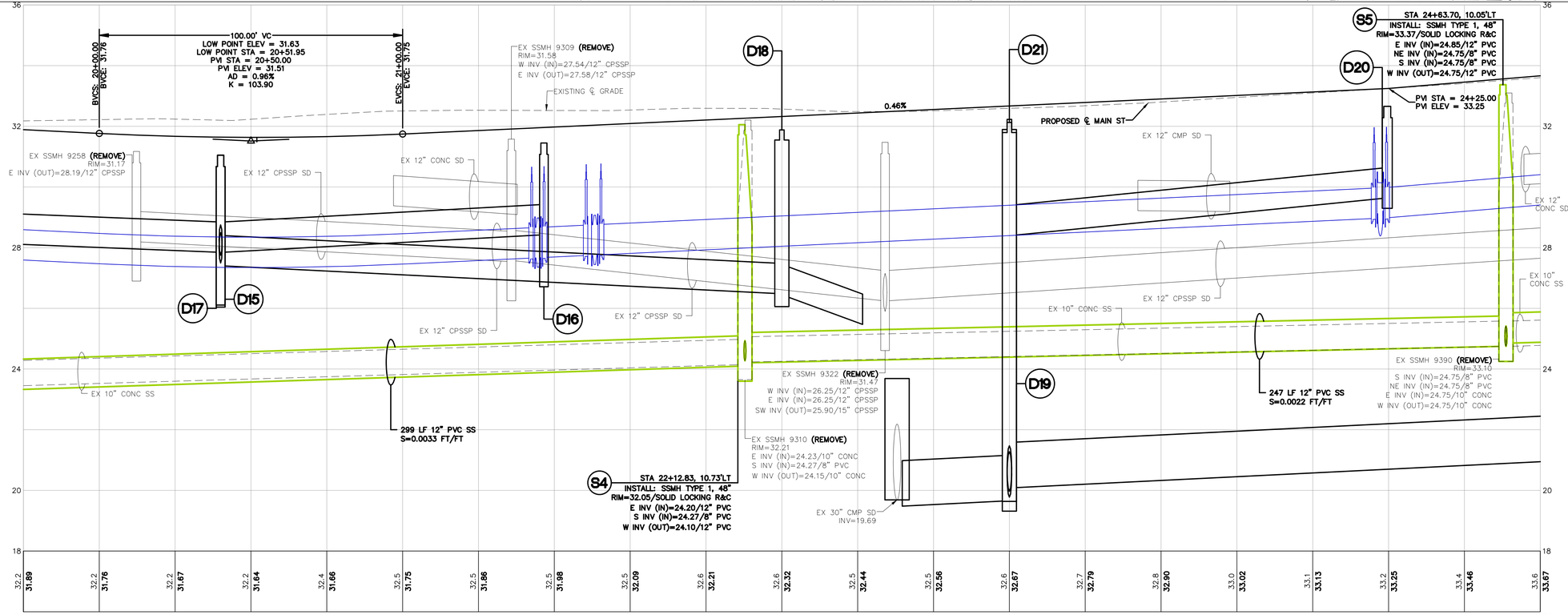
CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SANITARY SEWER AND WATER PLAN - STA 14+50 TO 19+75

DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=20' V: 1"=2'
SHEET 23 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 23 SANITARY SEWER AND WATER PLAN - STA 14+50 TO 19+75, 3/29/2024 3:15:41 PM, , AutoCAD PDF (General Documentation).pc3





GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)

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STATE OF WASHINGTON
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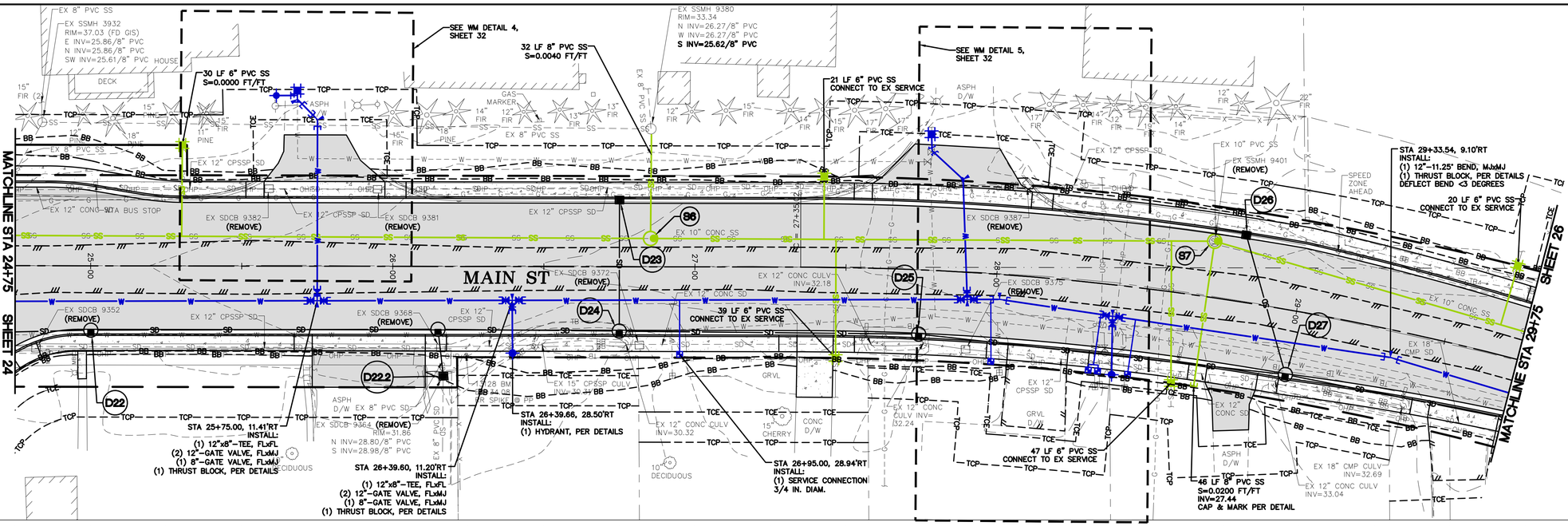
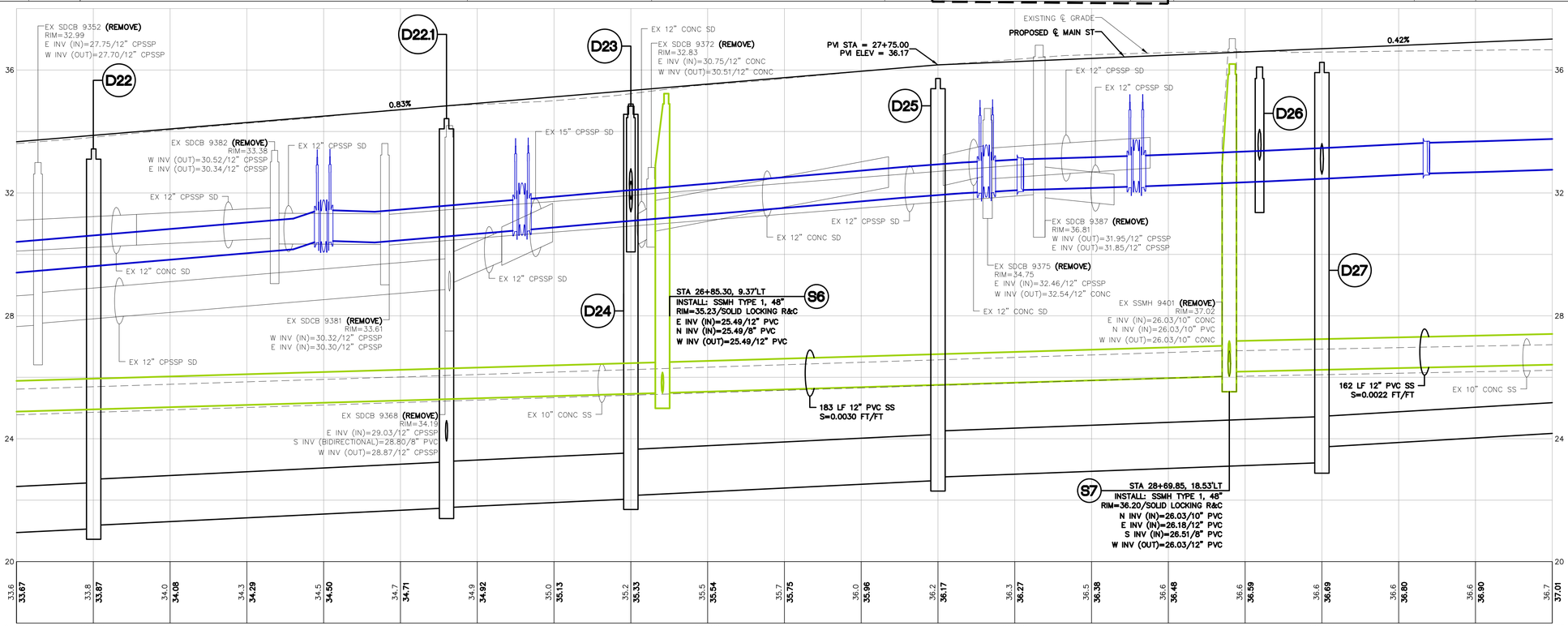
CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SANITARY SEWER AND WATER PLAN - STA 19+75 TO 24+75

DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=20' V: 1"=2'
SHEET 24 of 64

P:\Projects\22015\Cnd 3D 2022\22015 PLOT.dwg, 24 SANITARY SEWER AND WATER PLAN - STA 19+75 TO 24+75, 3/29/2024 3:16:25 PM, , AutoCAD PDF (General Documentation).pc3





PRELIMINARY
TYLER ROSS EBBE
STATE OF WASHINGTON
56224
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CHECKED BY	TRB

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Lynden, WA 98264 (360) 354-3687

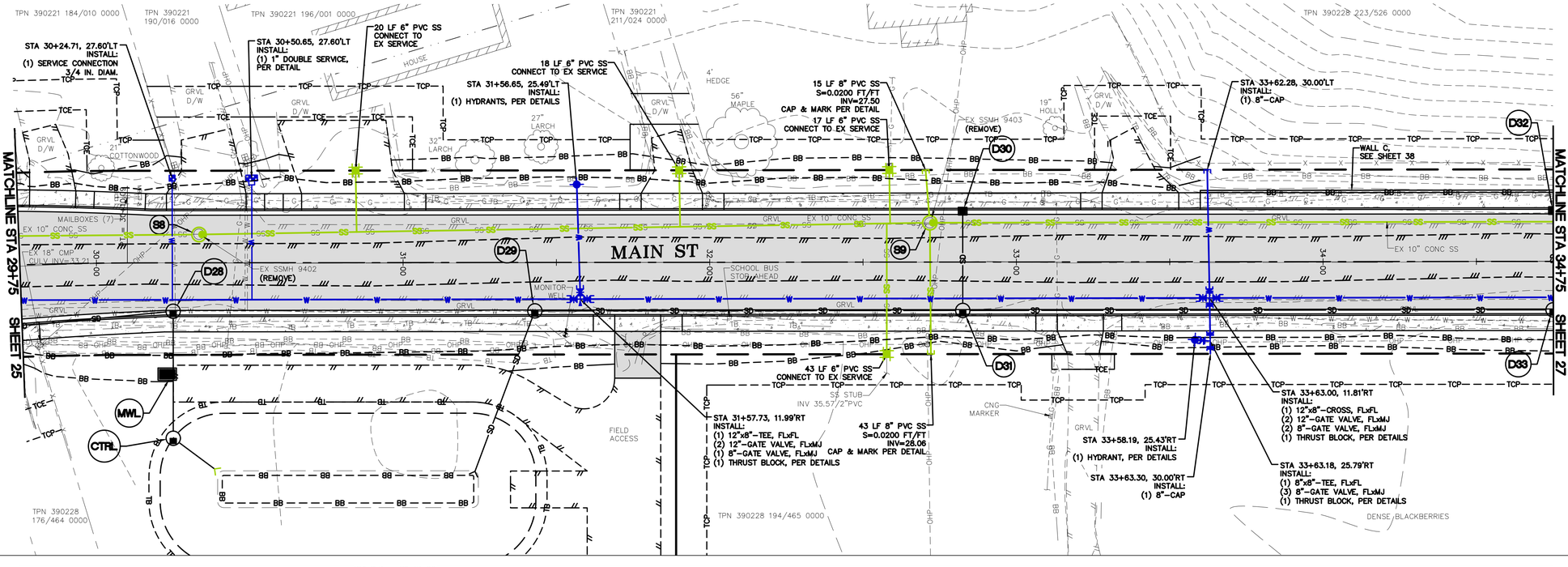
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SANITARY SEWER AND WATER PLAN - STA 24+75 TO 29+75

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'		SHEET 25 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 25 SANITARY SEWER AND WATER PLAN - STA 24+75 TO 29+75, 3/29/2024 3:17:10 PM, _AutoCAD PDF (General Documentation).pc3



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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS

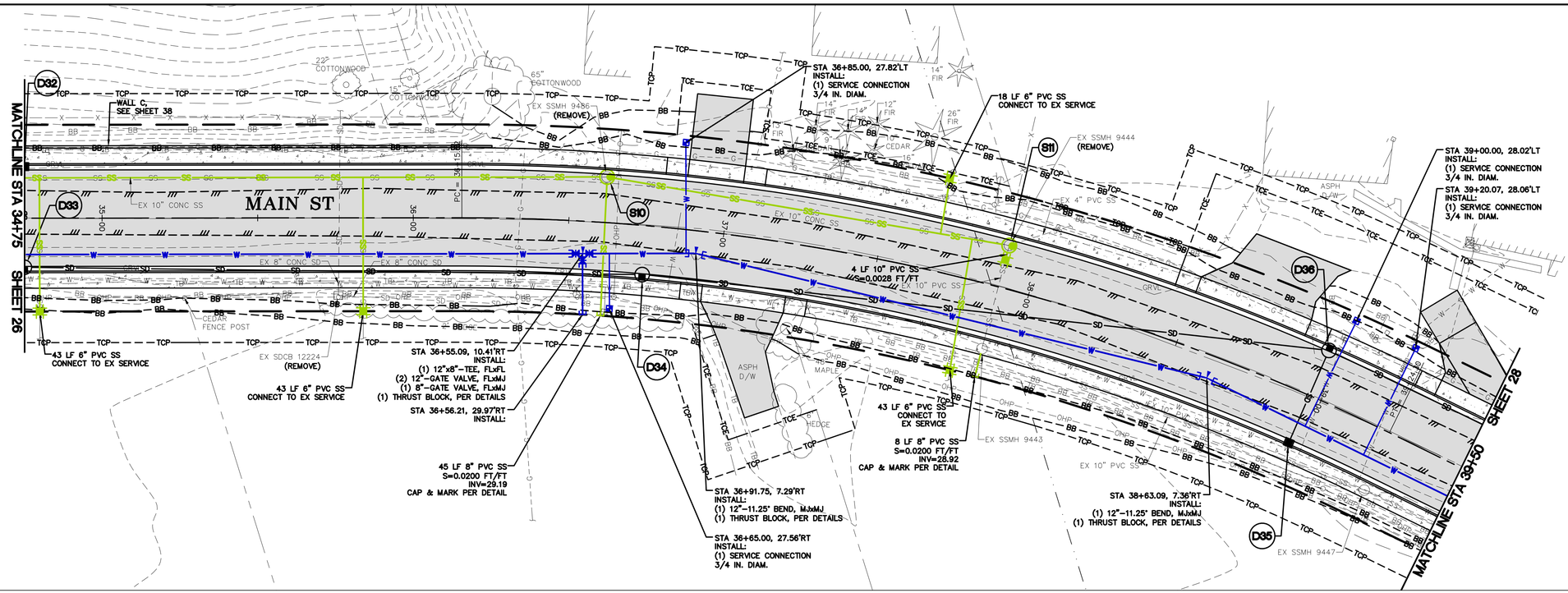
BARRETT ROAD TO OLD SETTLERS DRIVE

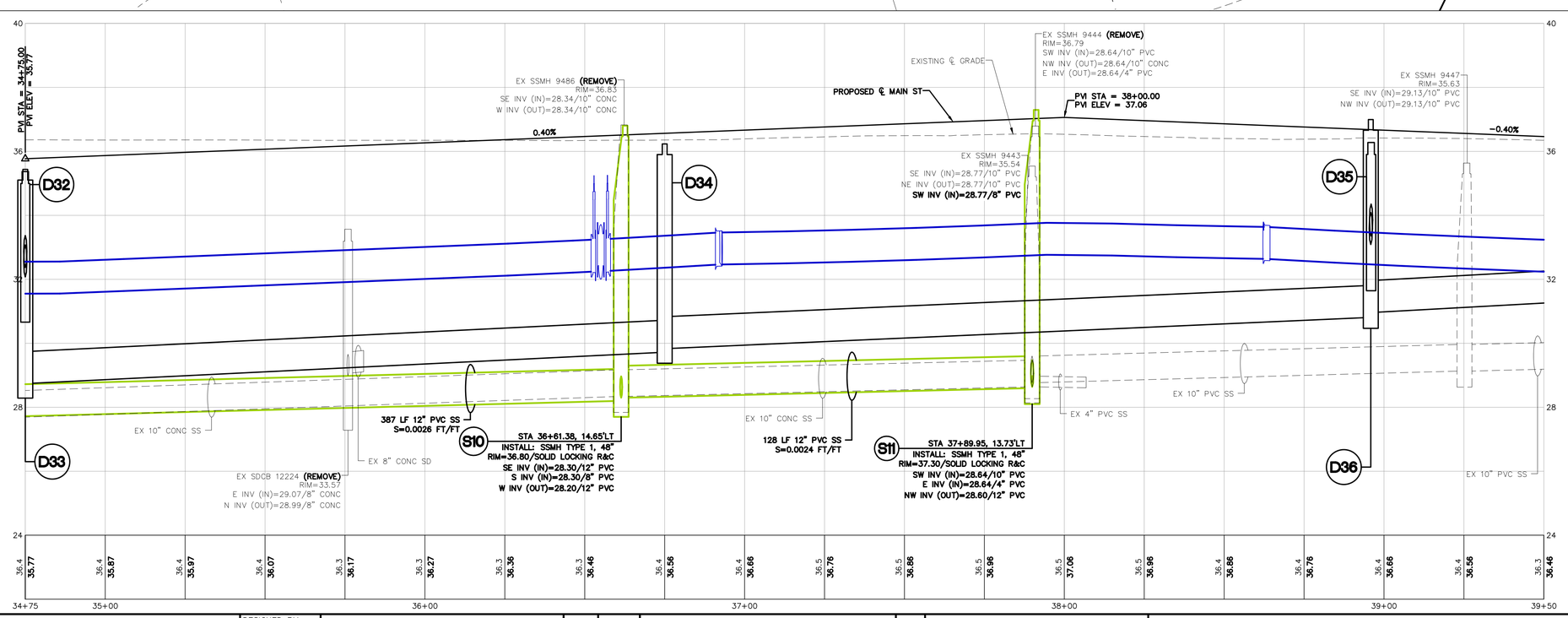
SANITARY SEWER AND WATER PLAN - STA 29+75 TO 34+75

TYLER ROSS EBEL 56224 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'		SHEET 26 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 26 SANITARY SEWER AND WATER PLAN - STA 29+75 TO 34+75, 3/29/2024 3:17:55 PM, , AutoCAD PDF (General Documentation).pc3





TYLER ROSS BIRMS
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56224
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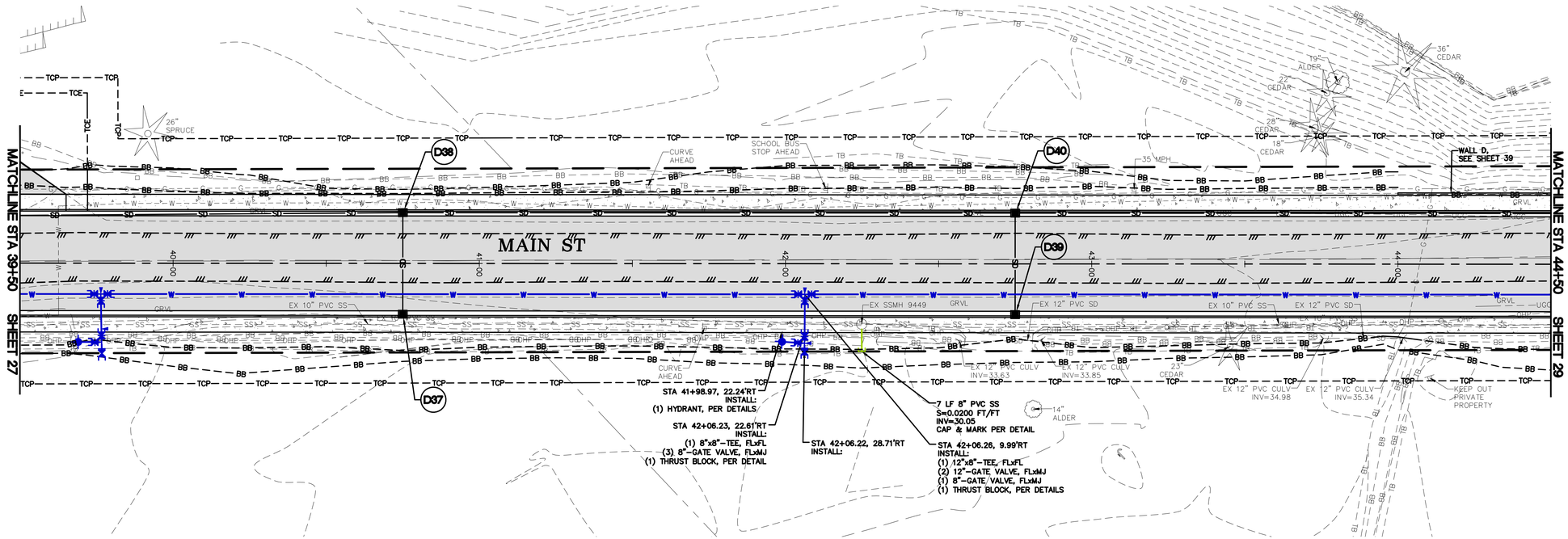
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SANITARY SEWER AND WATER PLAN - STA 34+75 TO 39+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'		SHEET 27 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 27 SANITARY SEWER AND WATER PLAN - STA 34+75 TO 39+50, 3/29/2024 3:18:40 PM, _AutoCAD PDF (General Documentation).pc3



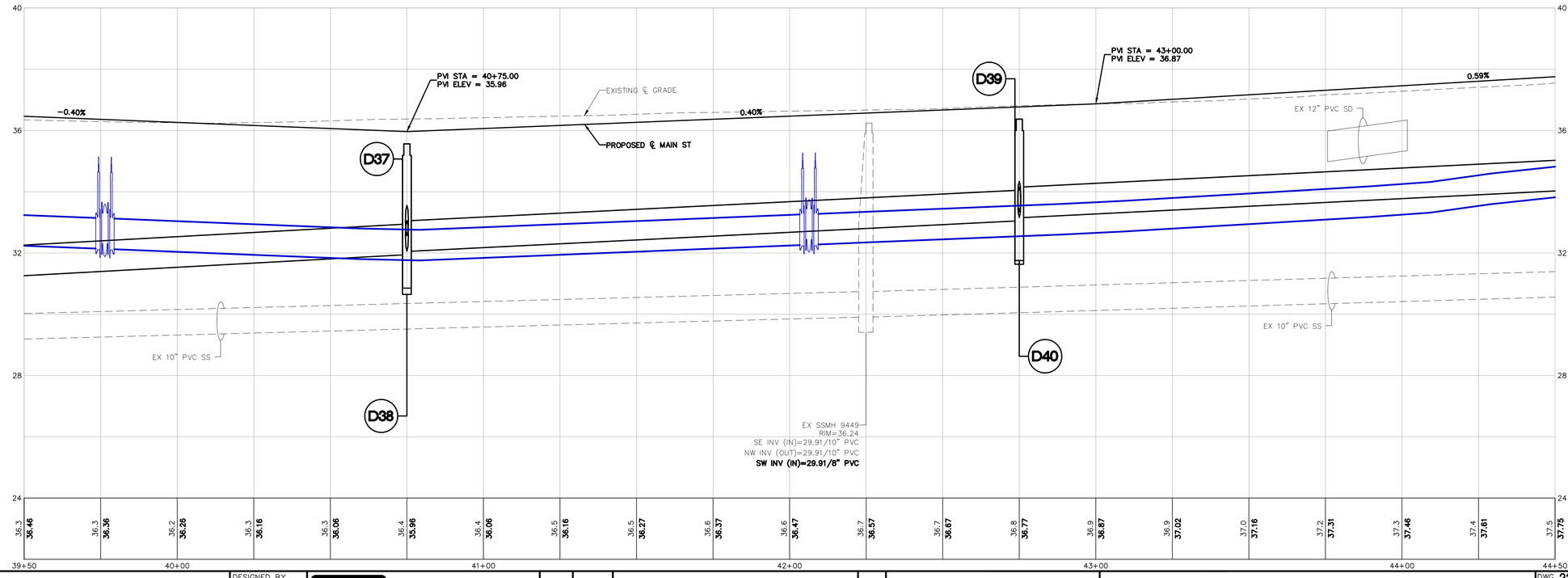
GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)



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STATE OF WASHINGTON
56224
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60% PLANS

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TRB	RGS	TRB

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Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SANITARY SEWER AND WATER PLAN - STA 39+50 TO 44+50

DWG 22015 PLOT

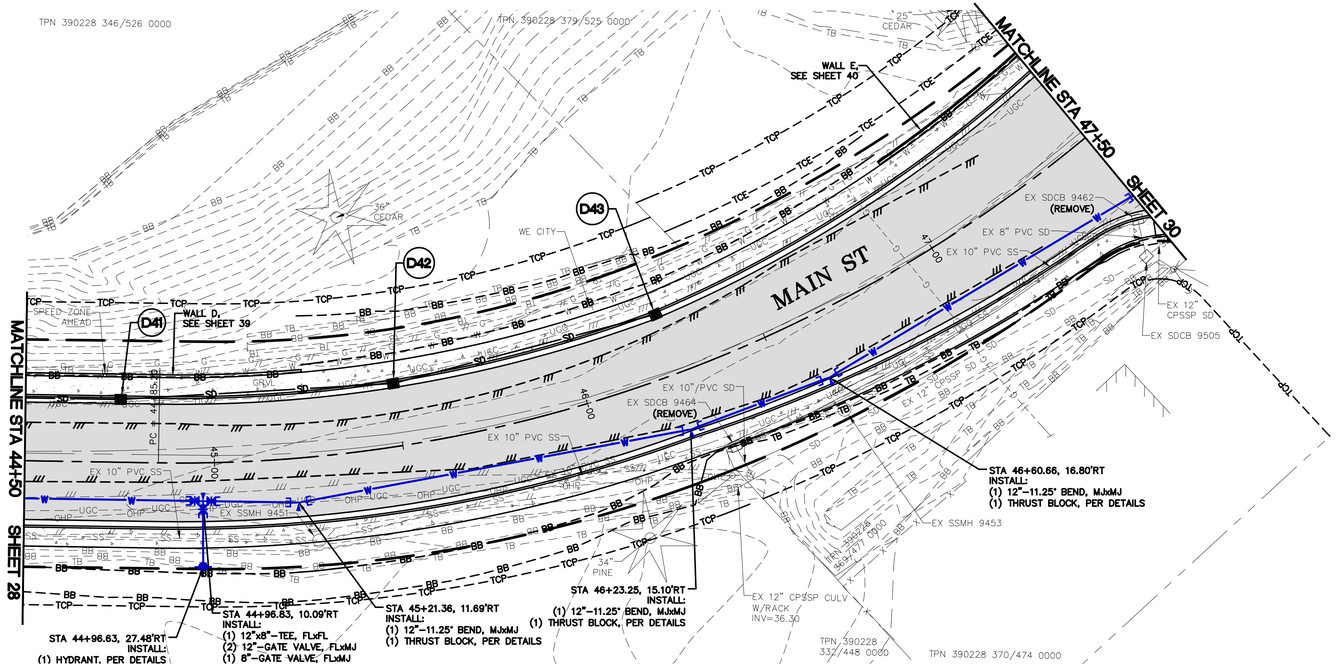
DATE 3/29/24

JOB# 22015

SCALE H: 1"=20' V: 1"=2'

SHEET 28 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 28 SANITARY SEWER AND WATER PLAN - STA 39+50 TO 44+50, 3/29/2024 3:19:25 PM, , AutoCAD PDF (General Documentation).pc3



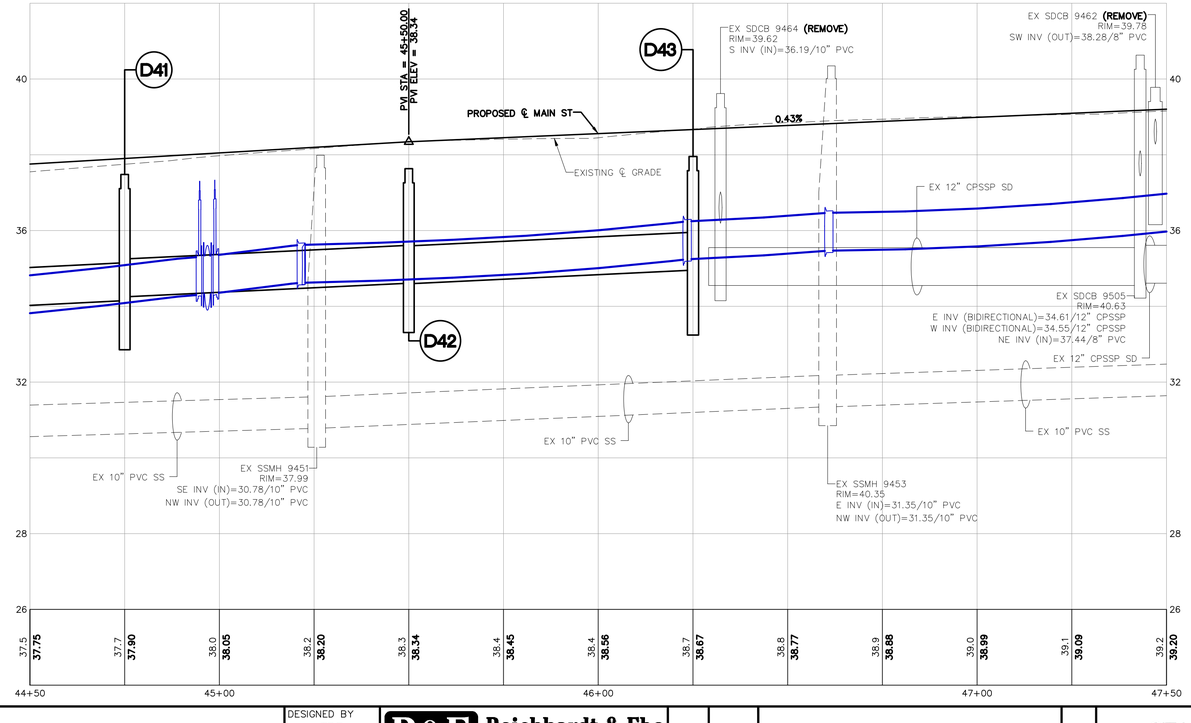
GRAPHIC SCALE

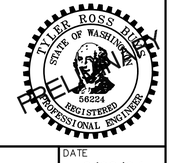
20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)





60% PLANS

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DRAWN BY	RGS
CHECKED BY	TRB

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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

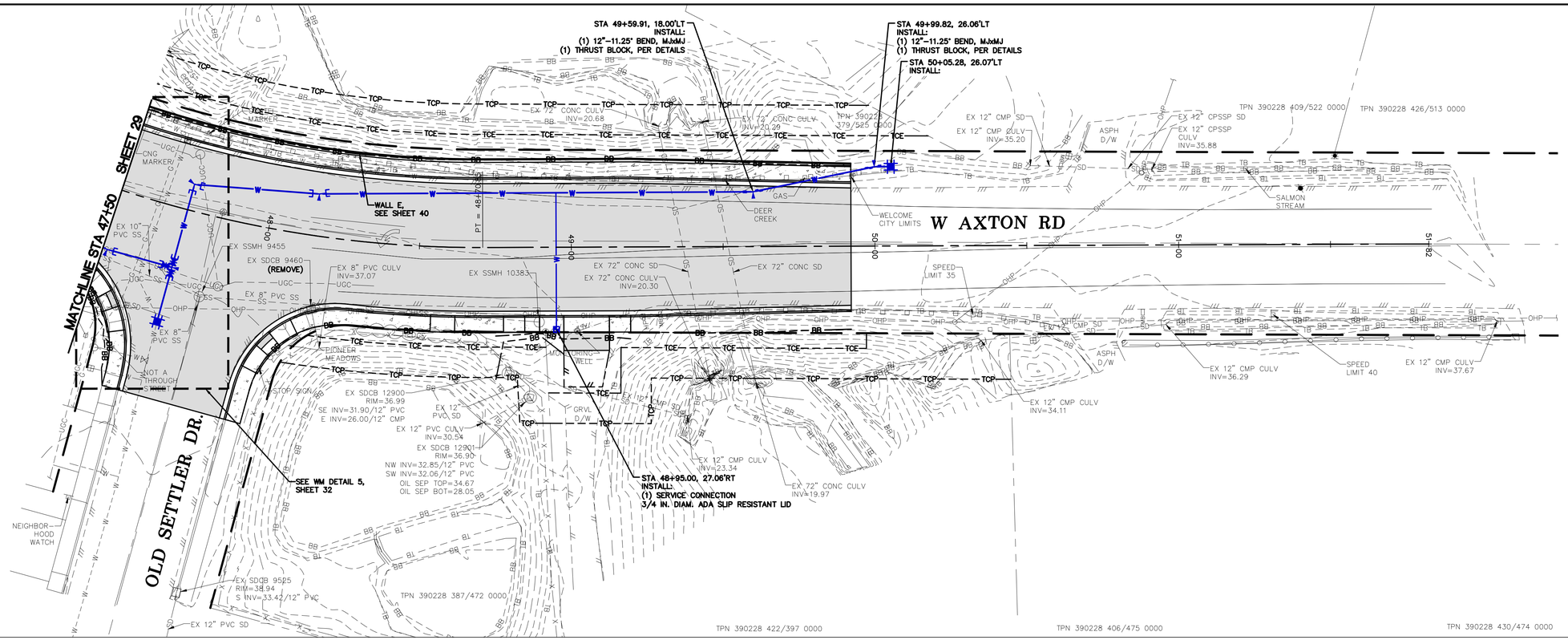
MAIN STREET IMPROVEMENTS

BARRETT ROAD TO OLD SETTLERS DRIVE

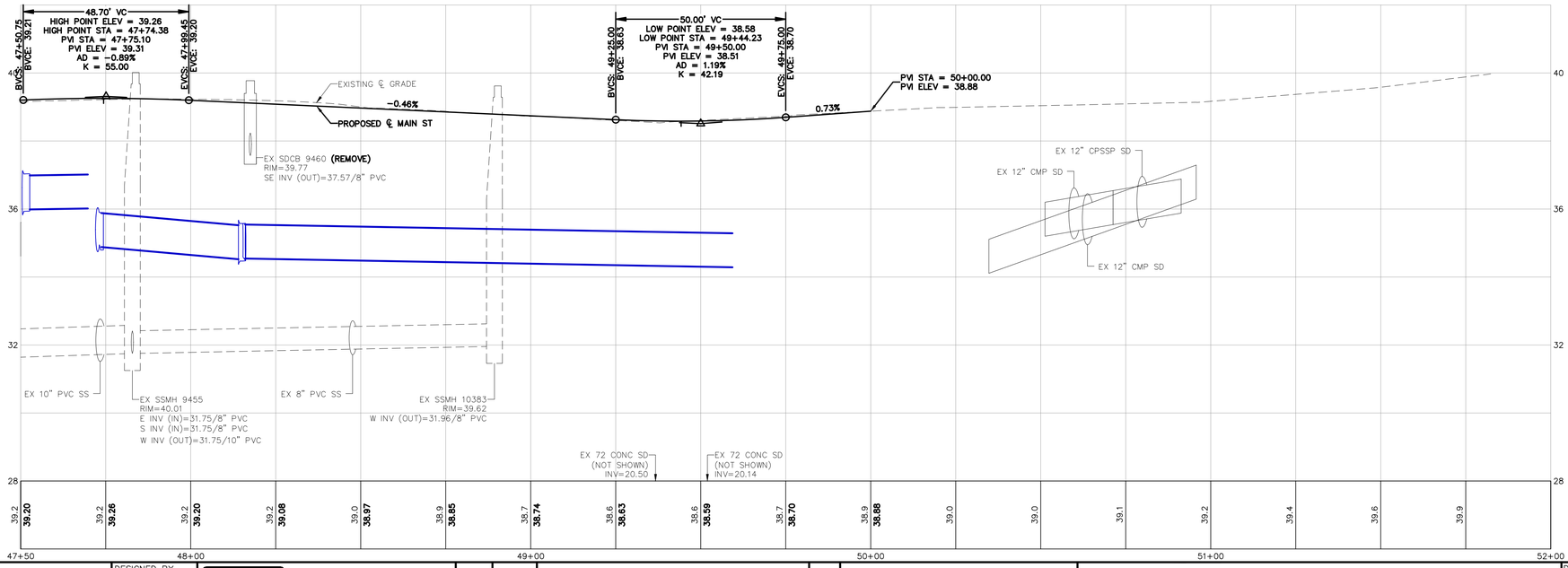
SANITARY SEWER AND WATER PLAN - STA 44+50 TO 47+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: 1"=2'		SHEET 29 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 29 SANITARY SEWER AND WATER PLAN - STA 44+50 TO 47+50, 3/29/2024 3:20:10 PM, _AutoCAD PDF (General Documentation).pc3



NOTE:
1. CONTRACTOR TO POTHOLE AT EACH SPECIFIED LOCATION 5 DAYS PRIOR TO PLANNED INSTALLATION TO VERIFY FITTINGS.



60% PLANS

DESIGNED BY	DRAWN BY	CHECKED BY
TRB	RGS	TRB

Reichardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

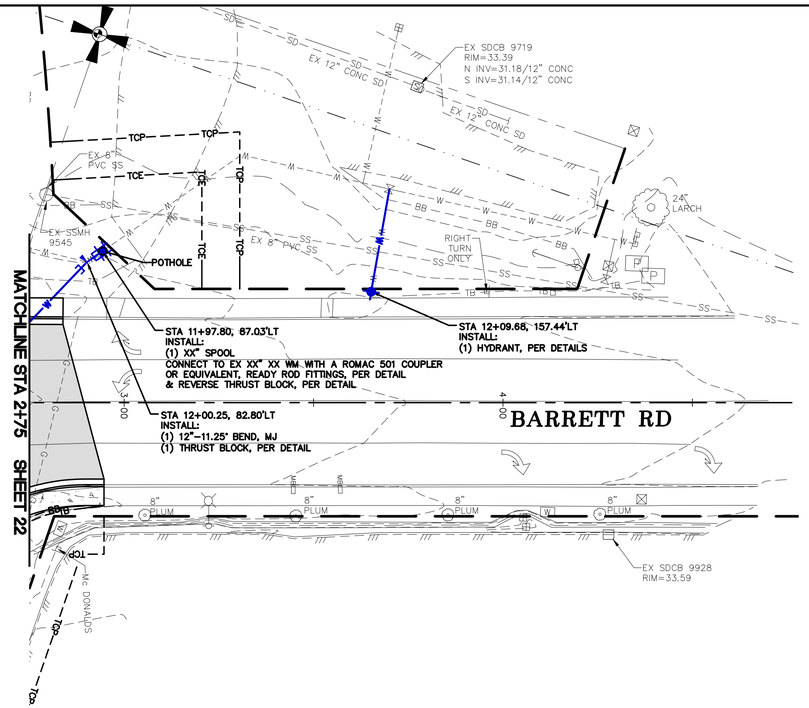
MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SANITARY SEWER AND WATER PLAN – STA 47+50 TO 52+00

DWG	DATE
22015 PLOT	3/29/24

JOB#	SCALE	SHEET
22015	H: 1"=20' V: 1"=2'	30 of 64

TYLER ROSS EBE
STATE OF WASHINGTON
56224
REGISTERED PROFESSIONAL ENGINEER

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 30 SANITARY SEWER AND WATER PLAN - STA 47+50 TO 52+00, 3/29/2024 3:21:05 PM, , AutoCAD PDF (General Documentation).pc3

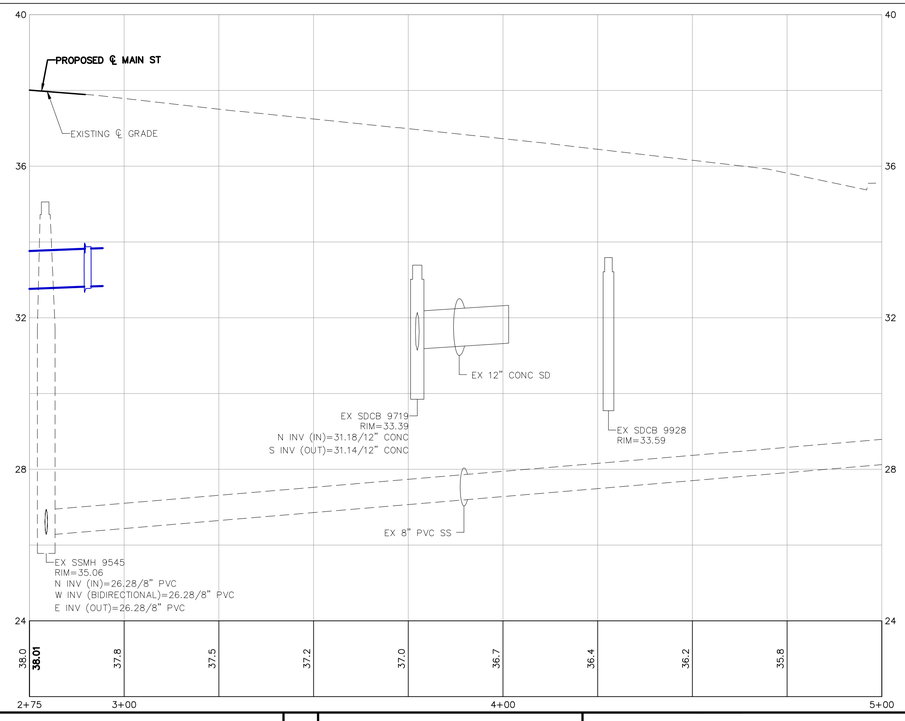


GRAPHIC SCALE

20 0 10 20

(IN FEET)
1"=20' H, 1"=2' V (22x34)
1"=40' H, 1"=4' V (11x17)

NOTE:
1. CONTRACTOR TO POTHOLE AT EACH SPECIFIED LOCATION 5 DAYS PRIOR TO PLANNED INSTALLATION TO VERIFY FITTINGS.



TILLER ROSS EBEL
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

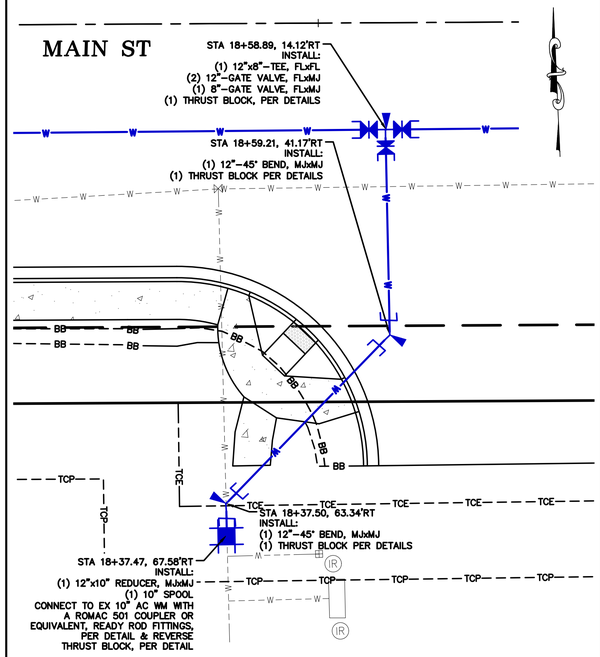
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

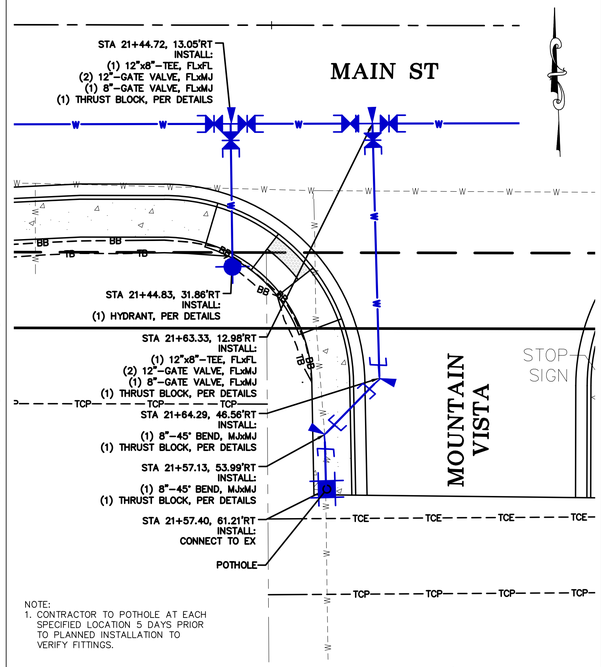
MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SANITARY SEWER AND WATER PLAN - BARRETT RD

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: 1"=2'	SHEET 31 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg 31 SANITARY SEWER AND WATER PLAN - BARRETT RD, 3/20/2024 3:22:10 PM, AutoCAD PDF (General Documentation).pc3

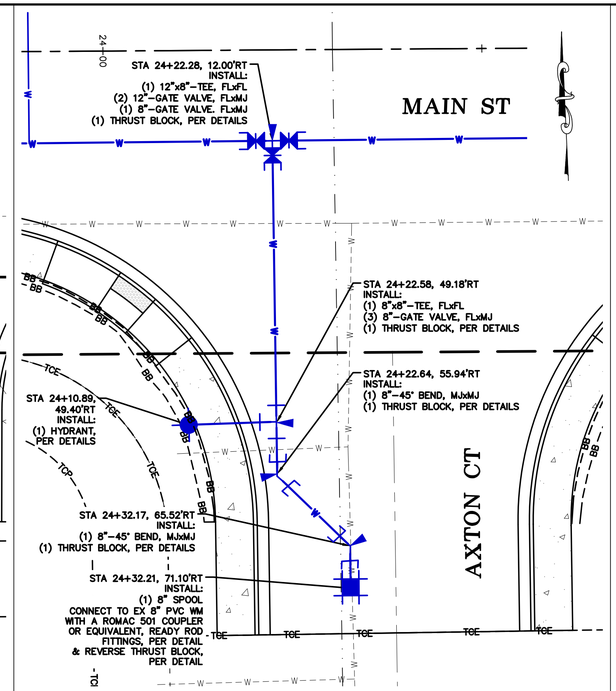


WM DETAIL 1 - APPROX. STA 18+50 SCALE: 1"=10'

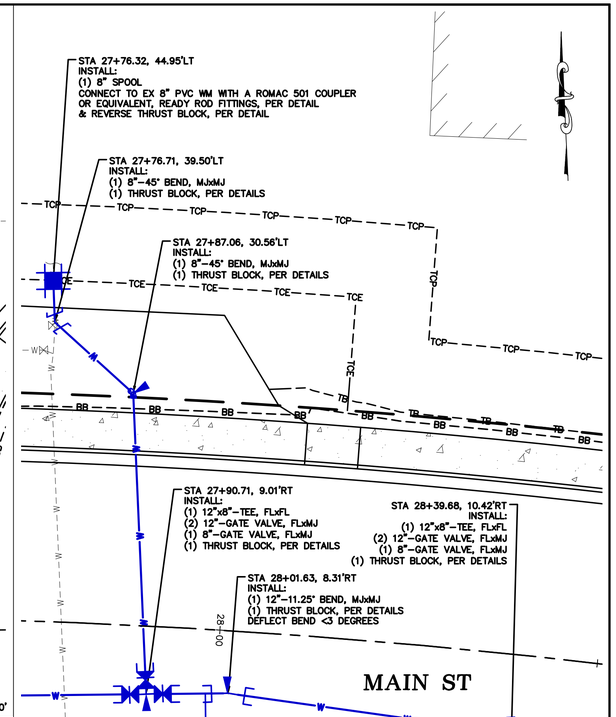


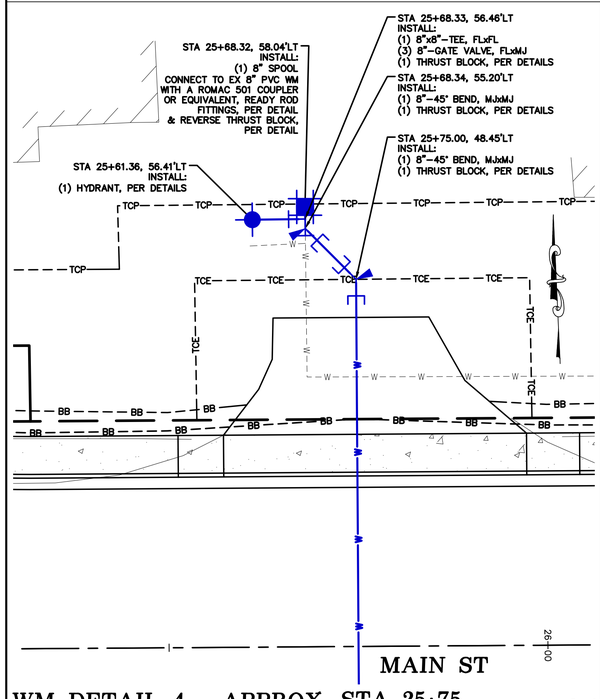
NOTE:
1. CONTRACTOR TO POTHOLE AT EACH SPECIFIED LOCATION 5 DAYS PRIOR TO PLANNED INSTALLATION TO VERIFY FITTINGS.

WM DETAIL 2 - APPROX. STA 21+50 SCALE: 1"=10'

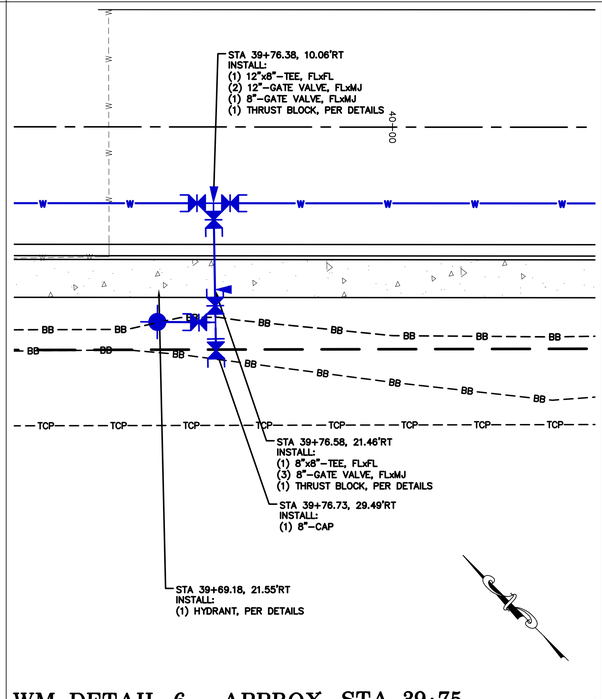


WM DETAIL 3 - APPROX. STA 24+25 SCALE: 1"=10'

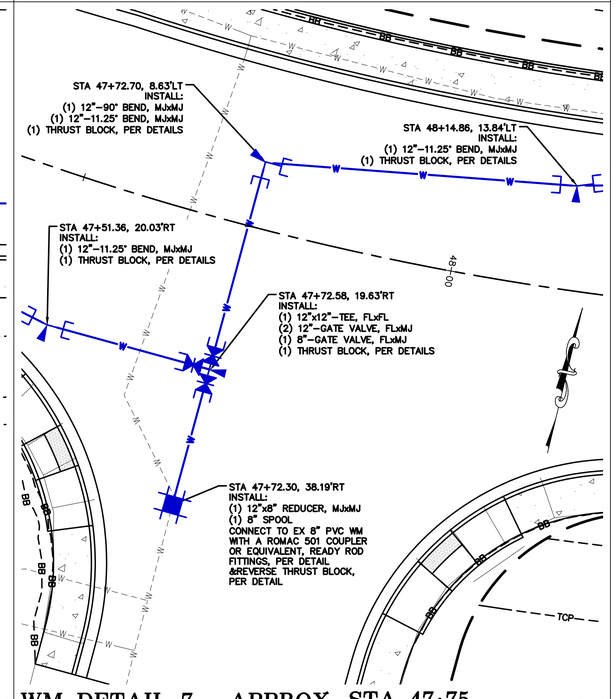




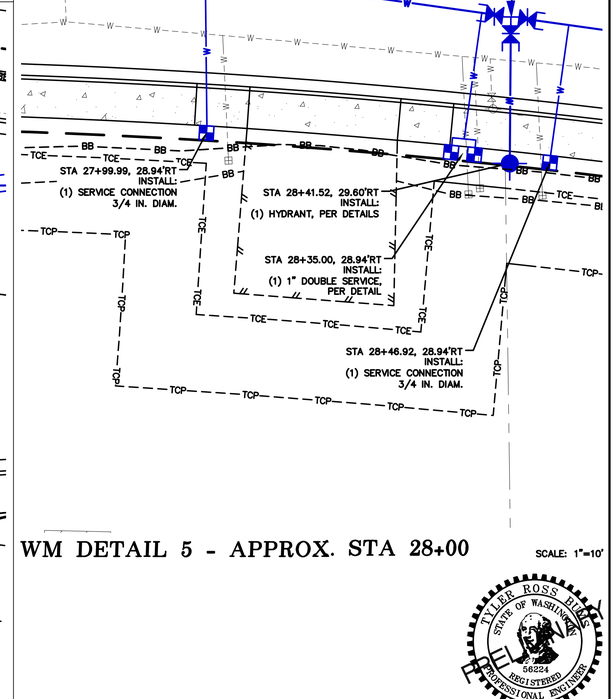
WM DETAIL 4 - APPROX. STA 25+75 SCALE: 1"=10'



WM DETAIL 6 - APPROX. STA 39+75 SCALE: 1"=10'



WM DETAIL 7 - APPROX. STA 47+75 SCALE: 1"=10'



WM DETAIL 5 - APPROX. STA 28+00 SCALE: 1"=10'

TYLER ROSS EBBE
STATE OF WASHINGTON
56224
REGISTERED PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

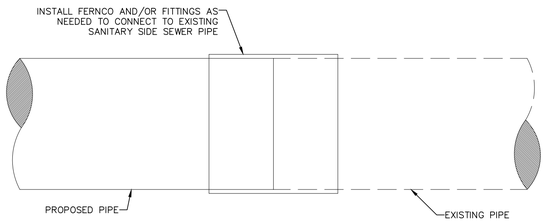
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
WATERMAIN DETAIL VIEW

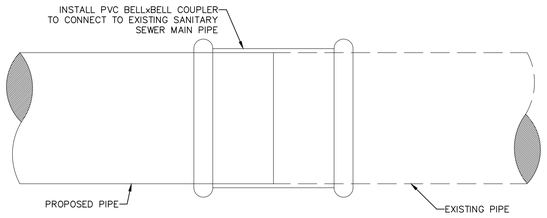
DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: 1"=2'	SHEET 32 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 32 WATERMAIN DETAIL VIEW, 3/29/2024 3:24:01 PM, , AutoCAD PDF (General Documentation).pc3



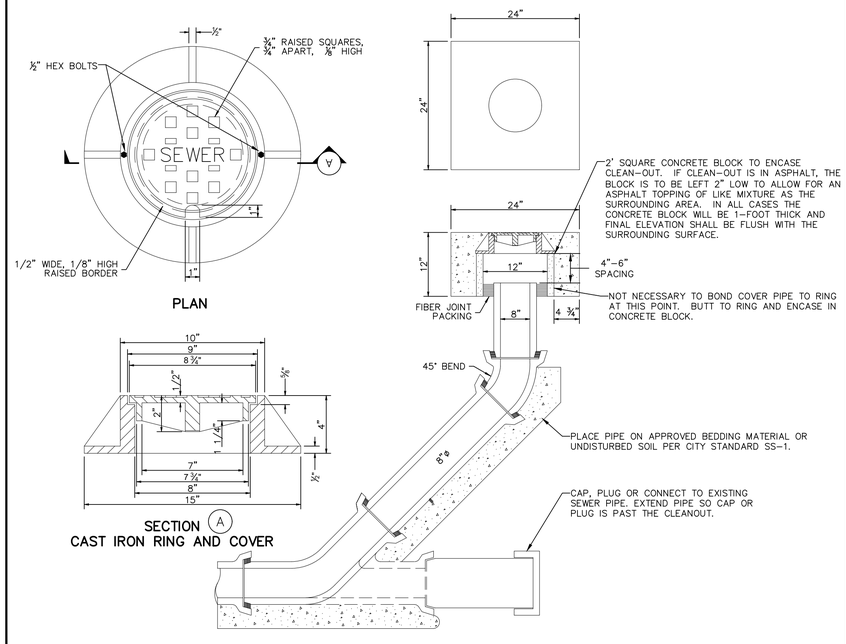
CONNECT TO EXISTING SIDE SEWER PIPE DETAIL LESS THAN OR EQUAL TO 6" DIA

NTS



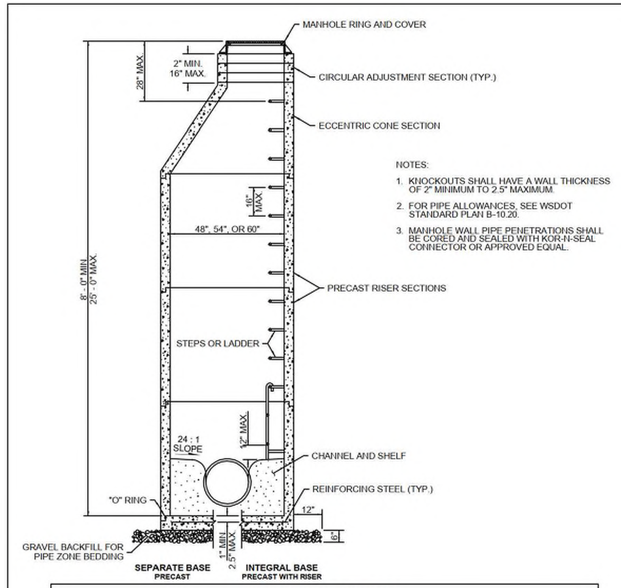
CONNECT TO EXISTING SEWER MAIN PIPE DETAIL

NTS



SANITARY SEWER 8" CLEAN OUT

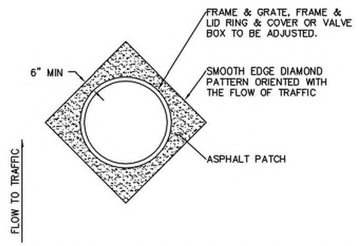
NTS



MANHOLE DIMENSION TABLE						
DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS	BASE REINFORCING STEEL SQ IN/FT EACH DIRECTION	
					INTEGRAL BASE	SEPARATE BASE
48"	4"	6"	36"	8"	0.15	0.23
54"	4.5"	8"	42"	8"	0.19	0.19
60"	5"	8"	48"	8"	0.25	0.25

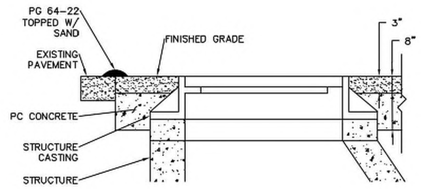
AUGUST 1, 2017

CITY OF FERNDALE WASHINGTON	APPROVED Public Works Director	8/11/17 Date	SANITARY SEWER MANHOLE TYPE 1 STANDARD DETAIL SS-3 NOT TO SCALE



NOTES:
ALL FRAMES, COVERS & VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADE AFTER THE FINAL LIFT OF PAVING HAS BEEN COMPLETED. THE FOLLOWING PROCEDURE SHALL BE USED:

1. CUT THE ASPHALT IN A DIAMOND AROUND THE STRUCTURE CASTING TO BE ADJUSTED.
2. REMOVE THE FILL MATERIAL WITHIN THE CUT PAVEMENT AREA TO 8 INCHES MIN. BELOW FINISH GRADE.
3. PLACE THE CASTING AT FINISH GRADE.
4. PLACE PORTLAND CEMENT CONCRETE TO WITHIN THE TOP 3 INCHES OF FINISH GRADE.
5. APPLY TACK TO THE STRUCTURE CASTING, CUT PAVEMENT, & PC CONCRETE.
6. PLACE & COMPACT 3 INCHES OF HMA TO FINISH GRADE.
7. SEAL PAVEMENT JOINTS W/ HOT PG 64-22 & TOP W/ SAND.



AUGUST 1, 2017

CITY OF FERNDALE WASHINGTON	APPROVED Public Works Director	8/11/17 Date	ADJUSTING CASINGS TO FINISHED GRADE STANDARD DETAIL SS-19 NOT TO SCALE

TYLER ROSS EBBE — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER — PRELIMINARY

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

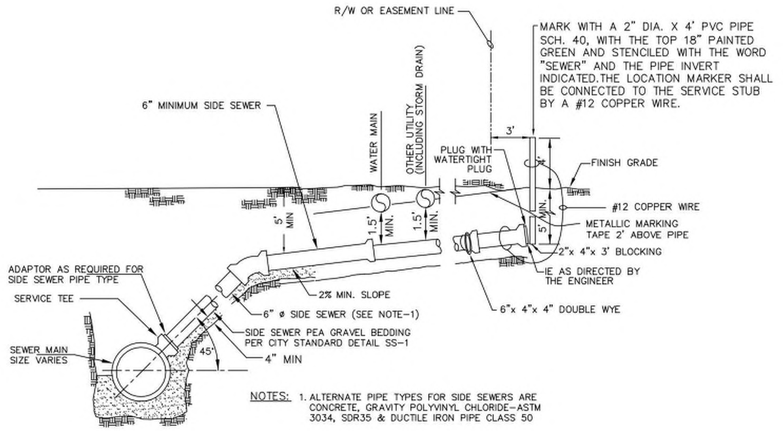
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SEWER DETAILS 1

DWG 22015 DETAILS			DATE 3/29/24
JOB# 22015	SCALE H: N/A	V: N/A	SHEET 33 of 64

P:\Projects\22015\Civil 3D 2021\22015 DETAILS.dwg, 33 SEWER DETAILS 1, 3/29/2024 3:25:32 PM, , AutoCAD PDF (General Documentation).pc3

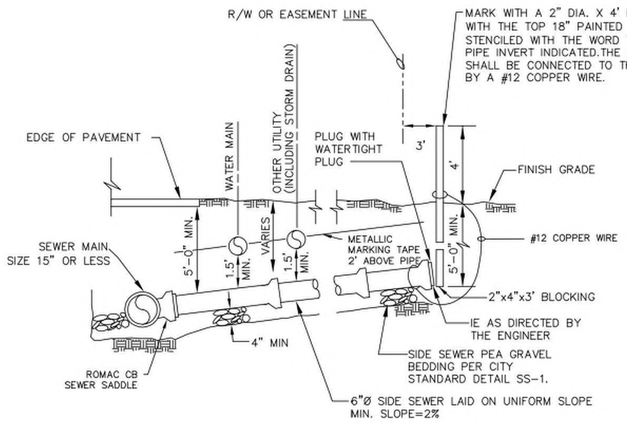


NOVEMBER 25, 2016

APPROVED

Public Works Director — 8/11/17 Date

SANITARY SEWER SERVICE CONNECTION 18" AND LARGER MAINS
STANDARD DETAIL SS-7
NOT TO SCALE

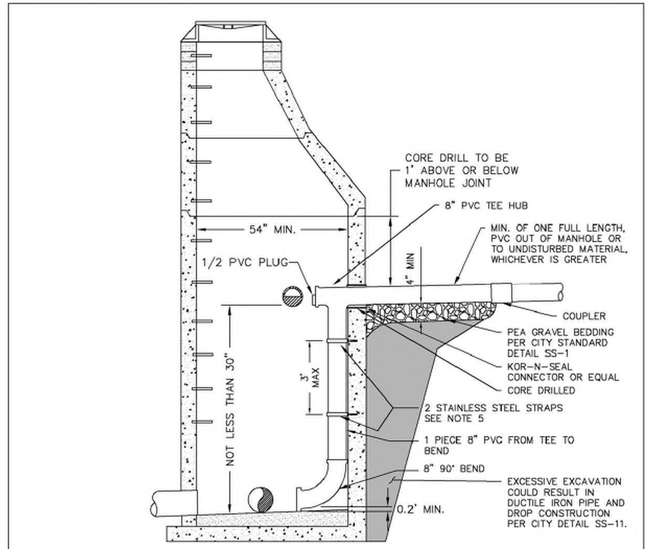


NOVEMBER 25, 2016

APPROVED

Public Works Director — 8/11/17 Date

SANITARY SEWER SERVICE CONNECTION 15" OR LESS
STANDARD DETAIL SS-6
NOT TO SCALE



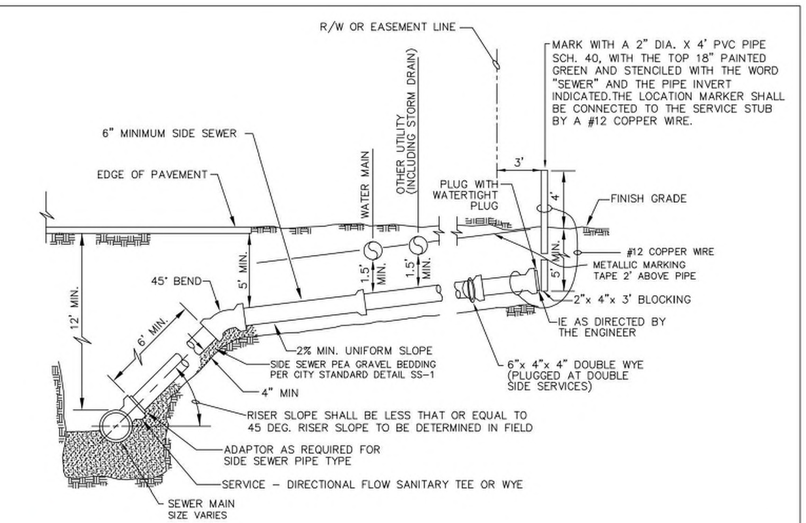
NOTES:
1. DROP TEE TO BE INSTALLED MINIMUM OF 3' BELOW CONE SECTION.
2. INSIDE DROP MANHOLE SHALL BE INSTALLED ONLY WHERE APPROVED BY THE PUBLIC WORKS DIRECTOR.
3. SIZE OF MANHOLE WILL INCREASE WITH LARGER DIAMETER PIPE AND SHALL BE APPROVED BY THE PUBLIC WORKS DIRECTOR.
4. CHANNEL TO OUTLET.
5. STAINLESS ADJUSTABLE PIPE BRACKETS AS MANUFACTURED BY RELINER-DURAN INC. OR APPROVED EQUAL. ATTACH TO WALL WITH ⅜" SS ANCHOR BOLTS.
6. INSIDE DROP SEWER MANHOLE CONNECTION FOR EXISTING SANITARY MANHOLE STRUCTURES.

APRIL 25, 2018

APPROVED

Public Works Director — 4/25/18 Date

INSIDE DROP SEWER MANHOLE CONNECTION
STANDARD DETAIL SS-13
NOT TO SCALE

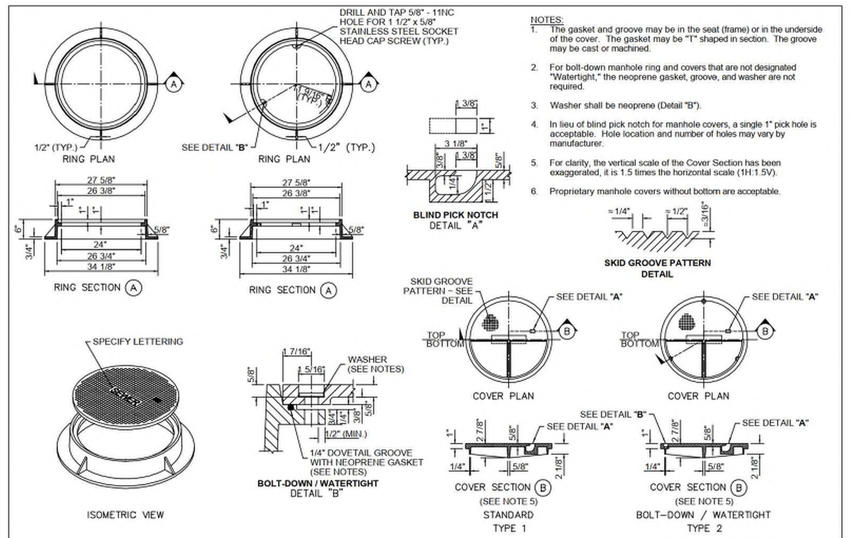


APRIL 18, 2017

APPROVED

Public Works Director — 8/11/17 Date

SANITARY SEWER SERVICE DEEP MAIN CONNECTION
STANDARD DETAIL SS-8
NOT TO SCALE



NOTES:
1. The gasket and groove may be in the seat (frame) or in the underside of the cover. The gasket may be "T" shaped in section. The groove may be cast or machined.
2. For bolt-down manhole ring and covers that are not designated "Watertight," the neoprene gasket, groove, and washer are not required.
3. Washer shall be neoprene (Detail "B").
4. In lieu of blind pick notch for manhole covers, a single 1" pick hole is acceptable. Hole location and number of holes may vary by manufacturer.
5. For clarity, the vertical scale of the Cover Section has been exaggerated, it is 1.5 times the horizontal scale (1H:1.5V).
6. Proprietary manhole covers without bottom are acceptable.

JUNE 14, 2017

APPROVED

Public Works Director — 8/11/17 Date

CIRCULAR FRAME AND COVER
STANDARD DETAIL SS-10
NOT TO SCALE

TYLER ROSS EIMS — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY TRB
DRAWN BY RGS
CHECKED BY TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

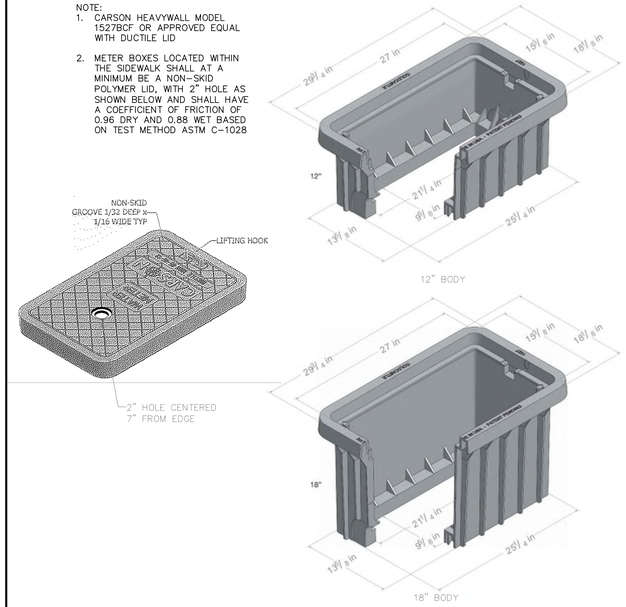
CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
SEWER DETAILS 2

DWG 22015 DETAILS
DATE 3/29/24
JOB# 22015
SCALE H: N/A V: N/A
SHEET 34 of 64

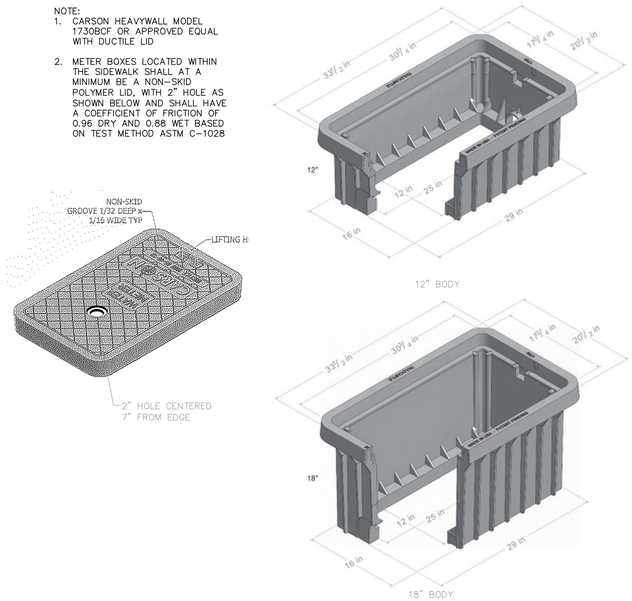
P:\Projects\22015\Civil 3D 2021\22015 DETAILS.dwg, 34 SEWER DETAILS 2, 3/29/2024 3:25:36 PM, , AutoCAD PDF (General Documentation).pc3

NOTE:
1. CARSON HEAVYWALL MODEL 1527BCF OR APPROVED EQUAL WITH DUCTILE LID
2. METER BOXES LOCATED WITHIN THE SIDEWALK SHALL AT A MINIMUM BE A NON-SKID POLYMER LID, WITH 2" HOLE AS SHOWN BELOW AND SHALL HAVE A COEFFICIENT OF FRICTION OF 0.96 DRY AND 0.88 WET BASED ON TEST METHOD ASTM C-1028

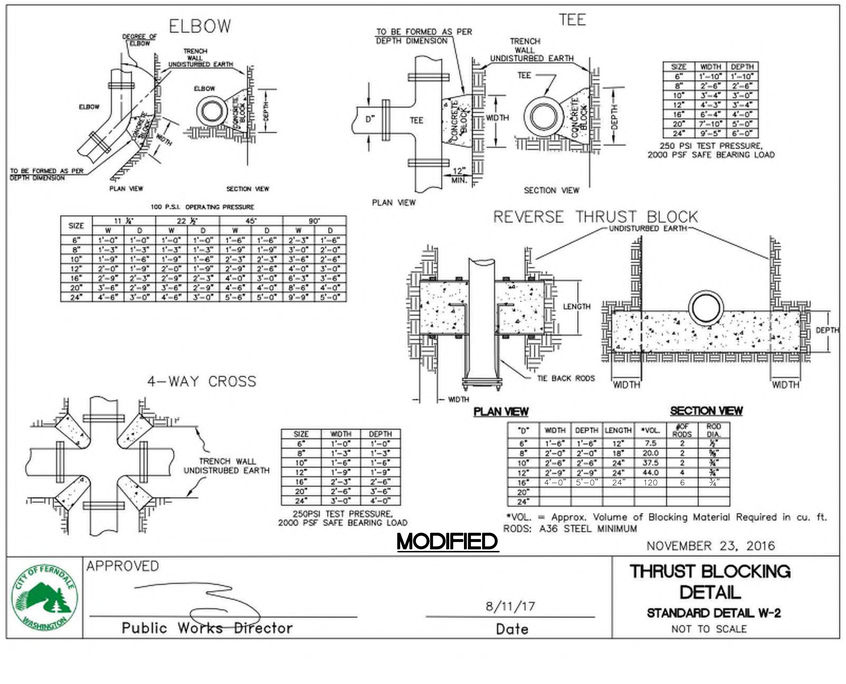


3/4" AND 1" WATER METER BOX
NTS

NOTE:
1. CARSON HEAVYWALL MODEL 1730BCF OR APPROVED EQUAL WITH DUCTILE LID
2. METER BOXES LOCATED WITHIN THE SIDEWALK SHALL AT A MINIMUM BE A NON-SKID POLYMER LID, WITH 2" HOLE AS SHOWN BELOW AND SHALL HAVE A COEFFICIENT OF FRICTION OF 0.96 DRY AND 0.88 WET BASED ON TEST METHOD ASTM C-1028



2" WATER METER BOX
NTS



SIZE	WIDTH	DEPTH
6"	1'-10"	1'-10"
8"	2'-6"	2'-6"
10"	3'-4"	3'-0"
12"	4'-3"	3'-4"
16"	6'-4"	4'-0"
20"	7'-10"	5'-0"
24"	9'-5"	6'-0"

250 PSI TEST PRESSURE, 2000 PSF SAFE BEARING LOAD

100 P.S.I. OPERATING PRESSURE

SIZE	11 1/4°		22 1/2°		45°		90°	
	W	D	W	D	W	D	W	D
6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-6"	2'-3"	1'-6"
8"	1'-3"	1'-3"	1'-3"	1'-3"	1'-9"	1'-9"	3'-0"	2'-0"
10"	1'-9"	1'-6"	1'-9"	1'-6"	2'-3"	2'-3"	3'-6"	2'-6"
12"	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"	2'-6"	4'-0"	3'-0"
16"	2'-3"	2'-3"	2'-9"	2'-3"	4'-0"	3'-0"	6'-3"	3'-6"
20"	3'-6"	2'-9"	3'-6"	2'-9"	4'-6"	4'-0"	8'-6"	4'-0"
24"	4'-6"	3'-0"	4'-6"	3'-0"	5'-6"	5'-0"	9'-9"	5'-0"

PLAN VIEW

SECTION VIEW

"D"	WIDTH	DEPTH	LENGTH	*VOL.	# OF RODS	ROD DIA.
6"	1'-6"	1'-6"	12"	7.5	2	¾"
8"	2'-0"	2'-0"	18"	20.0	2	¾"
10"	2'-6"	2'-6"	24"	37.5	2	¾"
12"	2'-9"	2'-9"	24"	44.0	4	¾"
16"	4'-0"	5'-0"	24"	120	6	¾"
20"						
24"						

*VOL. = Approx. Volume of Blocking Material Required in cu. ft.
RODS: A36 STEEL MINIMUM

4-WAY CROSS

SIZE	WIDTH	DEPTH
6"	1'-0"	1'-0"
8"	1'-3"	1'-3"
10"	1'-6"	1'-6"
12"	1'-9"	1'-9"
16"	2'-3"	2'-6"
20"	2'-6"	3'-6"
24"	3'-0"	4'-0"

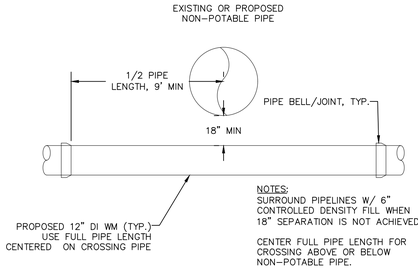
250PSI TEST PRESSURE, 2000 PSF SAFE BEARING LOAD

MODIFIED NOVEMBER 23, 2016

APPROVED

Public Works Director — 8/11/17 Date

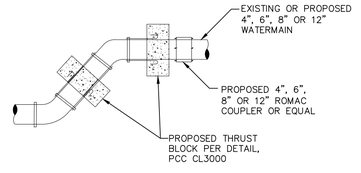
THRUST BLOCKING DETAIL
STANDARD DETAIL W-2
NOT TO SCALE



NOTES:
SURROUND PIPELINES W/ 6" CONTROLLED DENSITY FILL WHEN 18" SEPARATION IS NOT ACHIEVED.

CENTER FULL PIPE LENGTH FOR CROSSING ABOVE OR BELOW NON-POTABLE PIPE.

WATERMAIN CROSSING NON-POTABLE PIPE
NTS



REVERSE THRUST BLOCK CONNECTION TO EXISTING WATER MAIN
NTS

TYLER ROSS EBEL — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

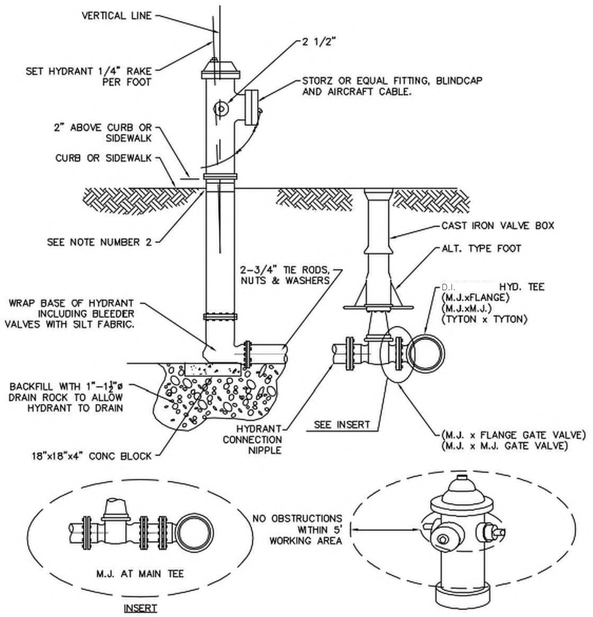
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
WATER DETAILS 1

DWG 22015 DETAILS			DATE 3/29/24
JOB# 22015	SCALE H: N/A	V: N/A	SHEET 35 of 64

P:\Projects\22015\Civil 3D 2021\22015 DETAILS.dwg, 35 WATER DETAILS 1, 3/29/2024 1:25:41 PM, , AutoCAD PDF (General Documentation).pc3

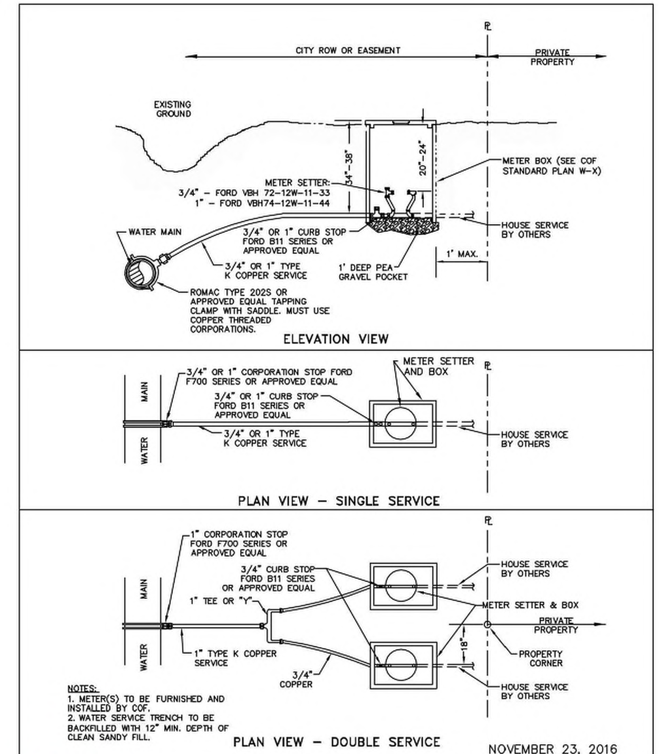


NOTES:
1. FOR CLOSE COUPLED HYDRANTS USE ALL FLANGE TYPE CONNECTIONS.
2. IF HYDRANT RISES THROUGH CONCRETE USE EXPANSION STRIP AROUND HYDRANT BARREL.
3. ALL HYDRANT ASSEMBLIES WILL BE M&H MODEL 929T.

MODIFIED
AUGUST 2, 2017

APPROVED
8/11/17
Public Works Director — Date

FIRE HYDRANT ASSEMBLY
STANDARD DETAIL W-1
NOT TO SCALE

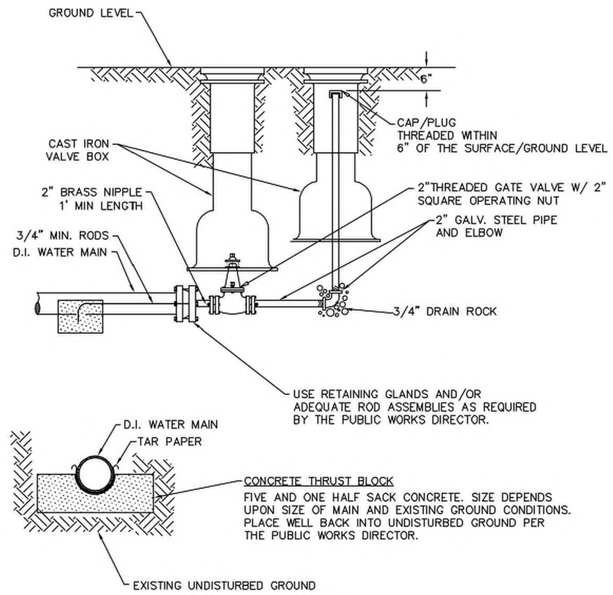


NOTES:
1. METER(S) TO BE FURNISHED AND INSTALLED BY COF.
2. WATER SERVICE TRENCH TO BE BACKFILLED WITH 12" MIN. DEPTH OF CLEAN SANDY FILL.

NOVEMBER 23, 2016

APPROVED
8/11/17
Public Works Director — Date

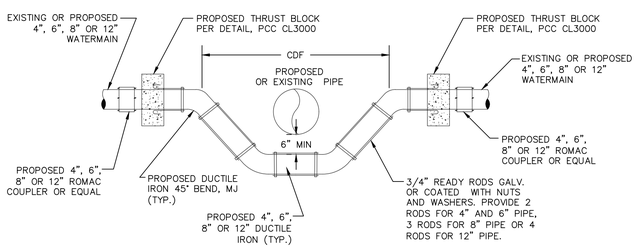
TYPICAL ¾" AND 1" WATER SERVICE
STANDARD DETAIL W-5
NOT TO SCALE



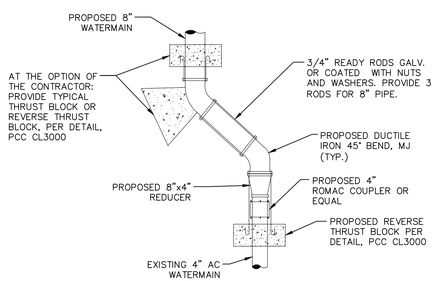
AUGUST 1, 2017

APPROVED
8/11/17
Public Works Director — Date

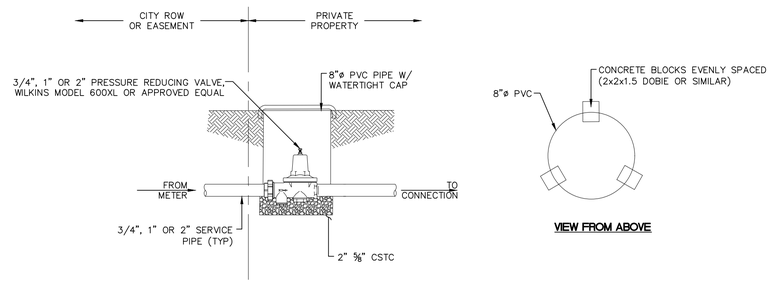
2" BLOW-OFF FUTURE WATERMAIN EXTENSION (ALTERNATIVE)
STANDARD DETAIL W-10
NOT TO SCALE



WATERMAIN STOVEPIPE
NTS



CONNECTION TO EXISTING DETAIL
NTS



PRESSURE REDUCING VALVE DETAIL
NTS

TYLER ROSS EBBE
STATE OF WASHINGTON
56224
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

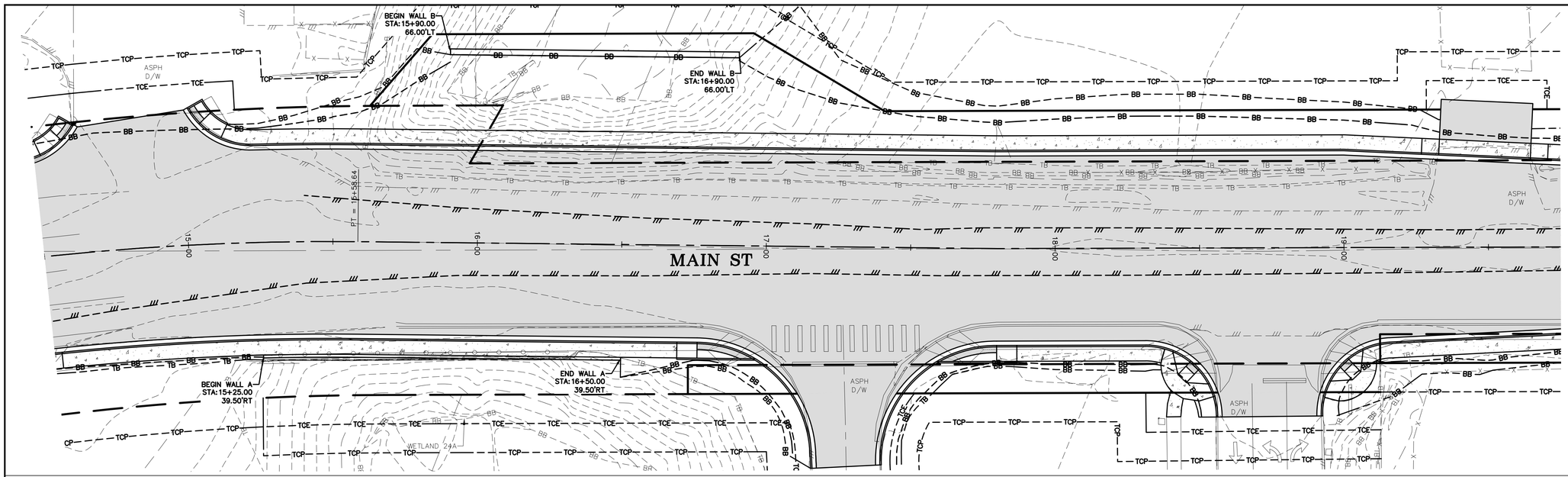
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
WATER DETAILS 2

DWG 22015 DETAILS		DATE 3/29/24
JOB# 22015	SCALE H: N/A V: N/A	SHEET 36 of 64

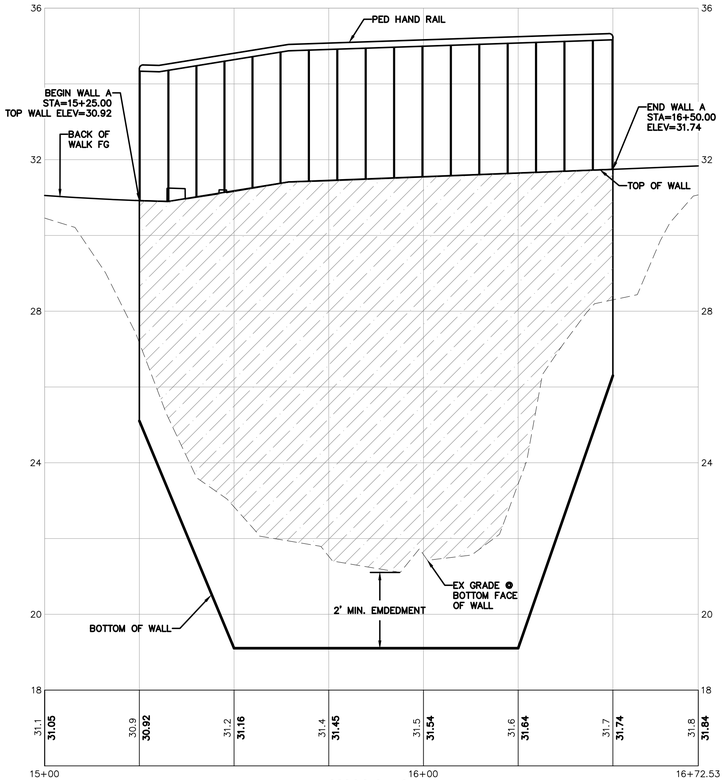
P:\Projects\22015\Civil 3D 2021\22015 DETAILS.dwg, 36 WATER DETAILS 2, 3/29/2024 3:25:46 PM, , AutoCAD PDF (General Documentation).pc3



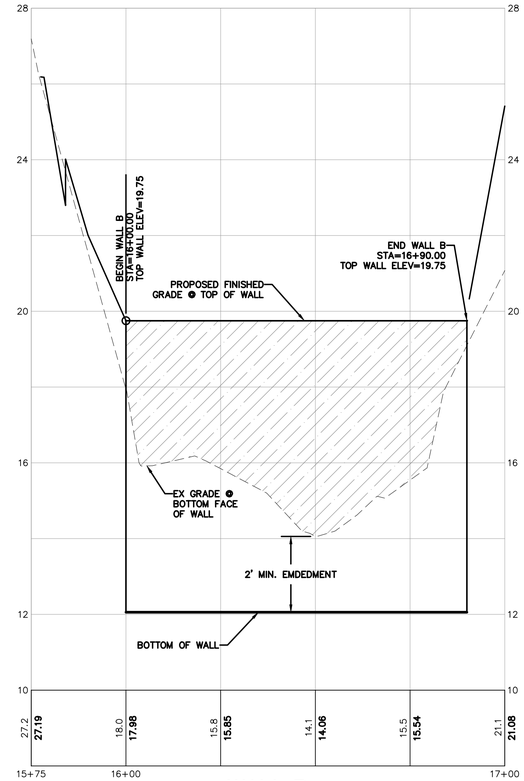
GRAPHIC SCALE

20 0 10 20

(IN FEET)
1"=20' H, 1"=2' V (22x34)
1"=40' H, 1"=4' V (11x17)



WALL A



WALL B

TYLER ROSS BLAKE
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

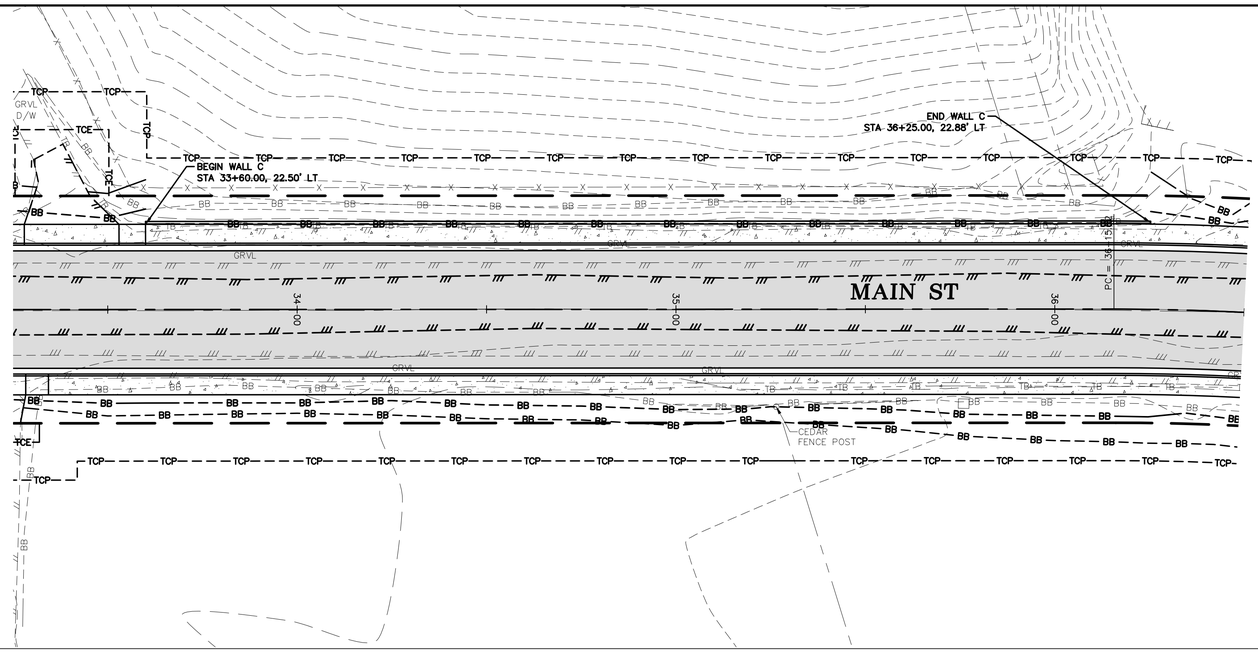
NO.	DATE	DESCRIPTION	BY

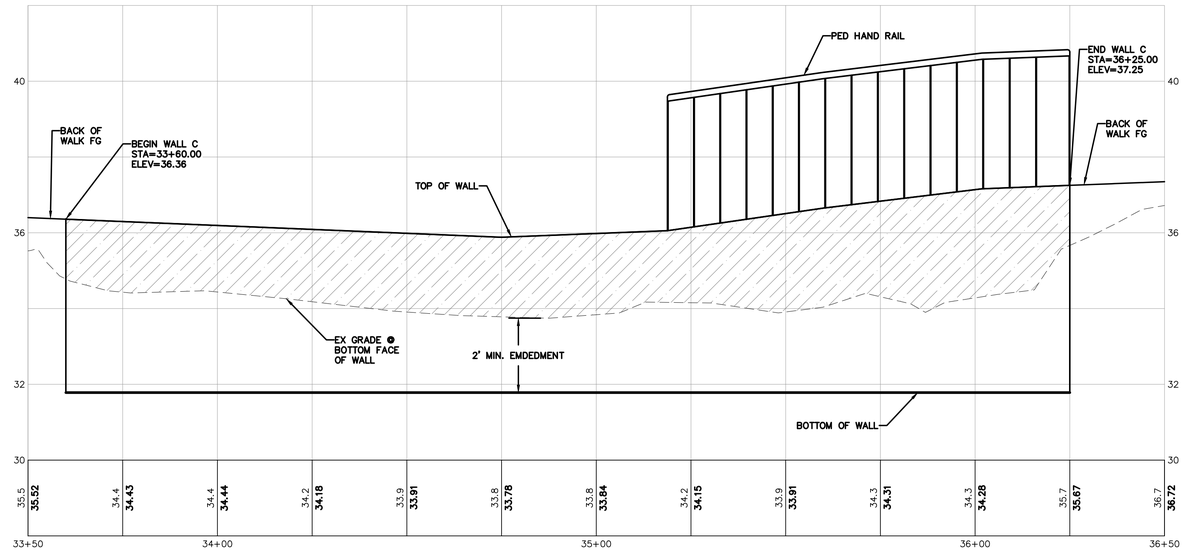
CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
WALLS A AND B PLAN AND PROFILE

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: 1"=2'	SHEET 37 of 64

P:\Projects\22015\Cnd 3D 2021\22015 PLOT.dwg, 37 WALLS A AND B PLAN AND PROFILE, 3/29/2024 1:27:19 PM, _AutoCAD PDF (General Documentation).pc3





WALL C

GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

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Lynden, WA 98264 (360) 354-3687

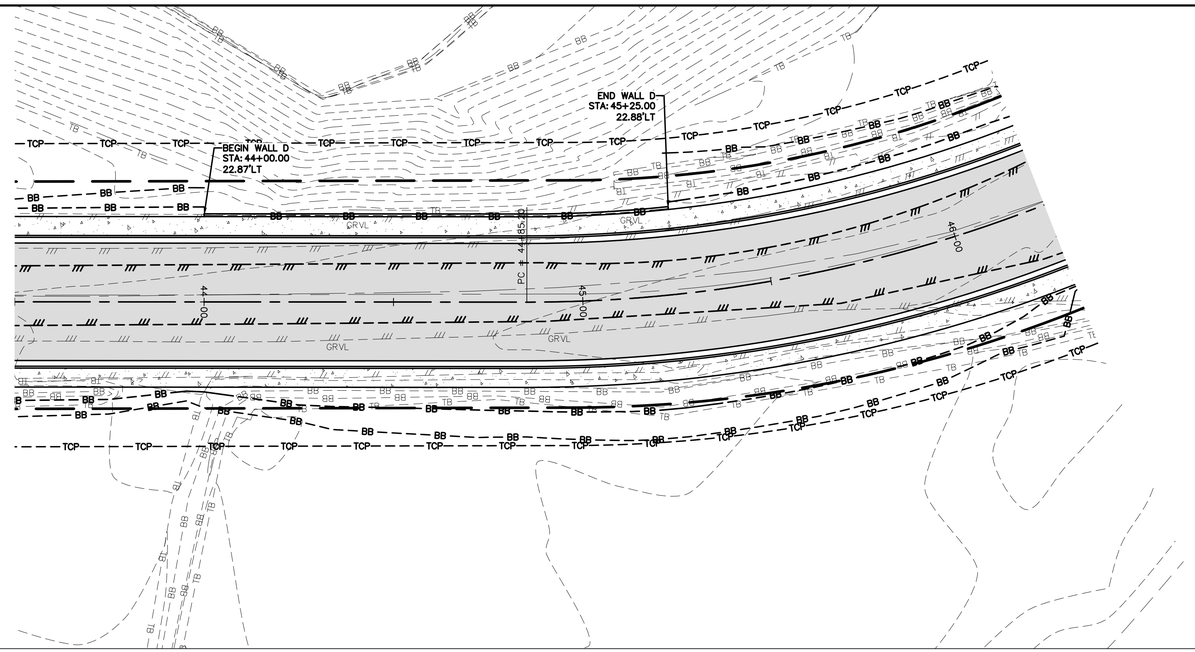
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
WALL C PLAN AND PROFILE

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: 1"=2'	SHEET 38 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 38 WALL C PLAN AND PROFILE, 3/29/2024 3:28:17 PM, , AutoCAD PDF (General Documentation).pc3



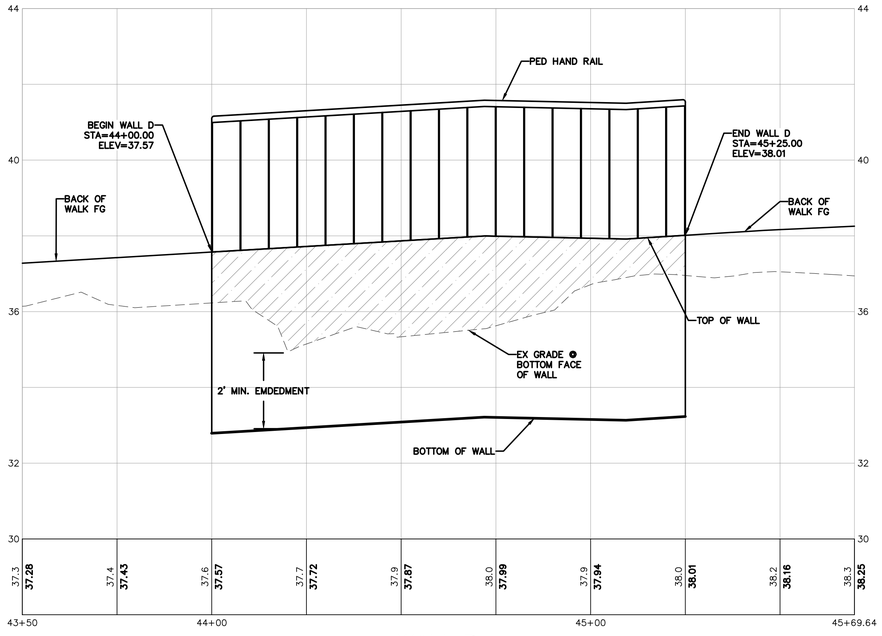
GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)



WALL D

TILLER ROSS ELLIS
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

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P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
WALL D PLAN AND PROFILE

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: 1"=2'	SHEET 39 of 64

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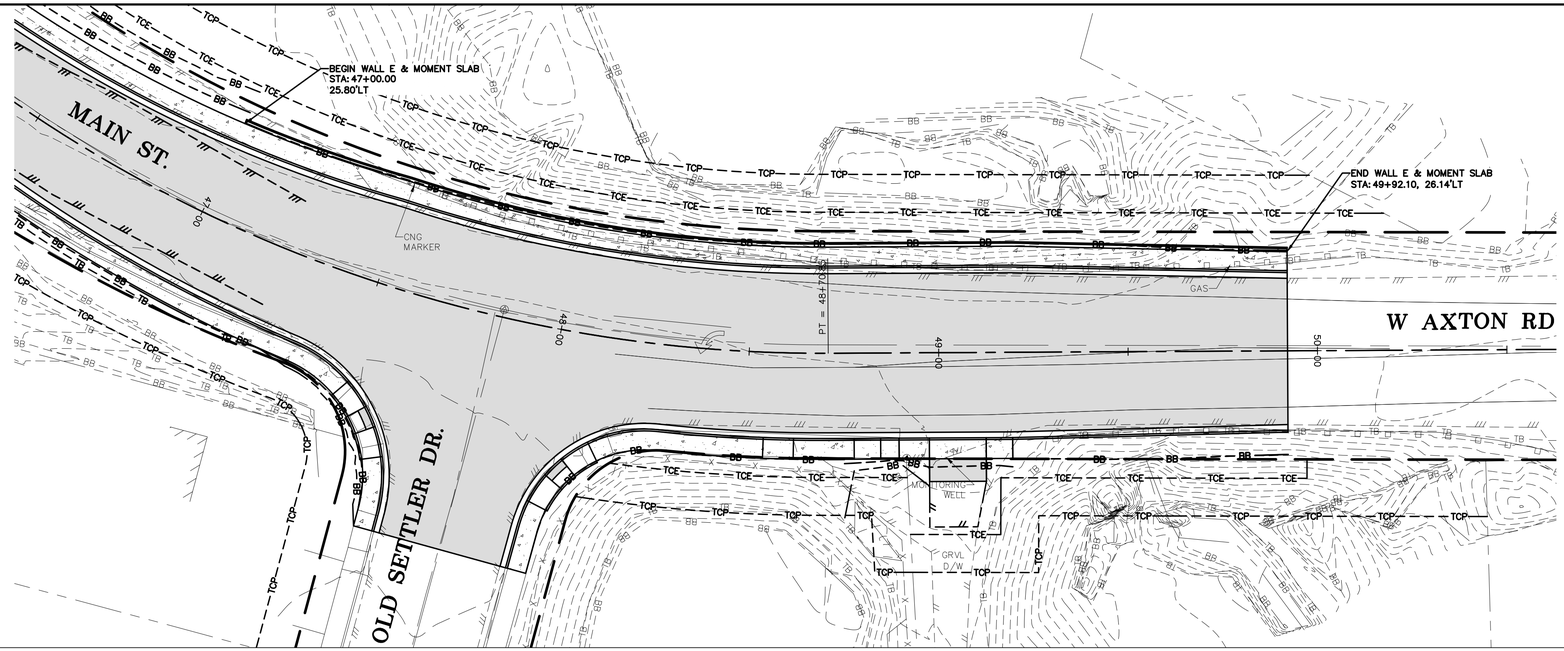


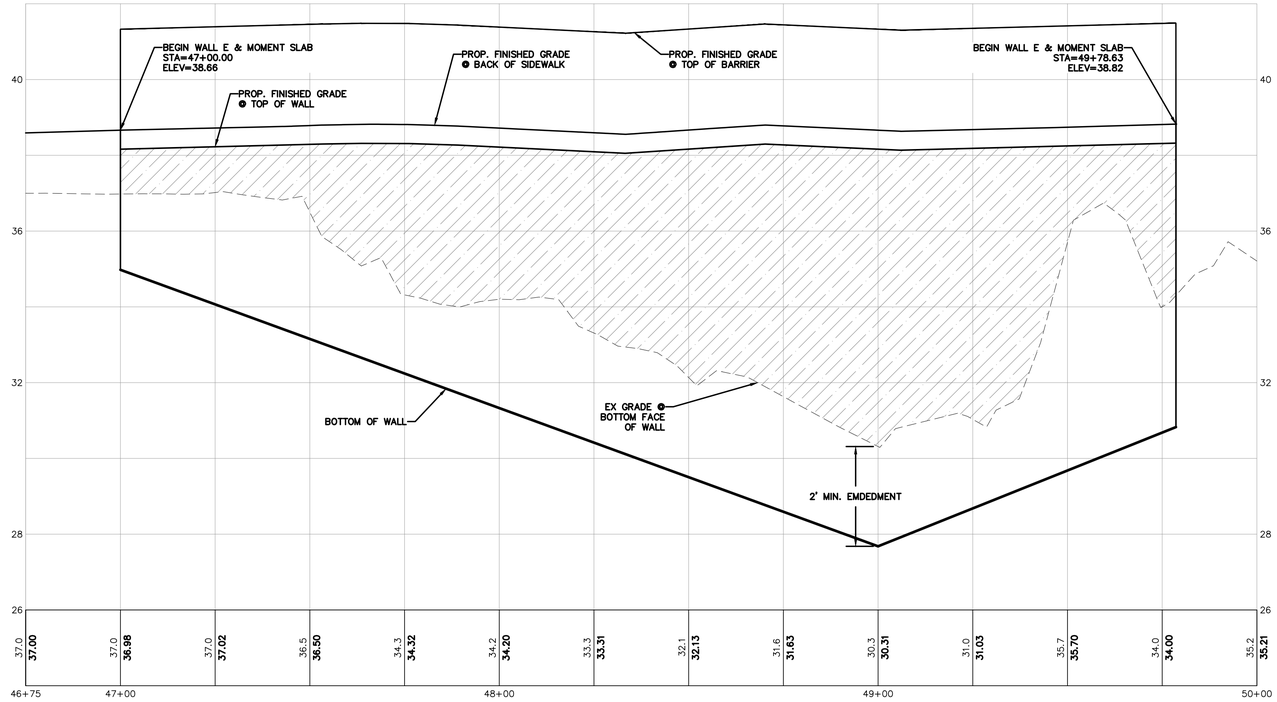
GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' H, 1"=2' V (22x34)

1"=40' H, 1"=4' V (11x17)



WALL E

TYLER ROSS ELDER
STATE OF WASHINGTON
56224
REGISTERED PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY TRB
DRAWN BY RGS
CHECKED BY TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
WALL E PLAN AND PROFILE

DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=20' V: 1"=2'
SHEET 40 of 64

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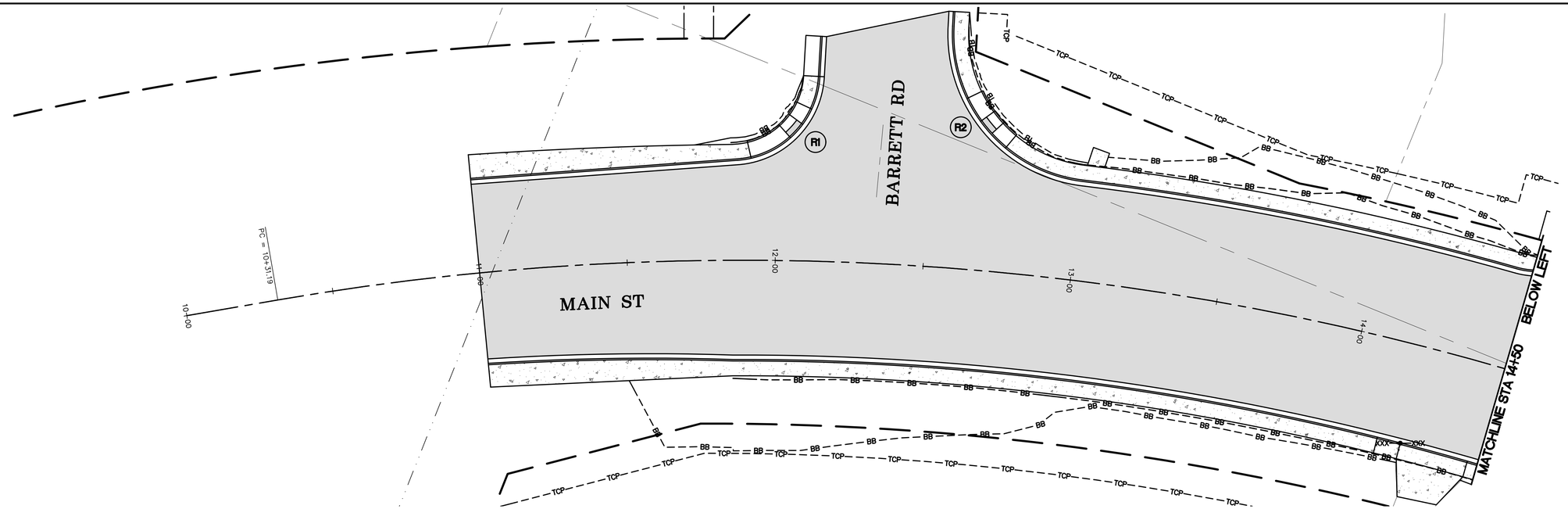


GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

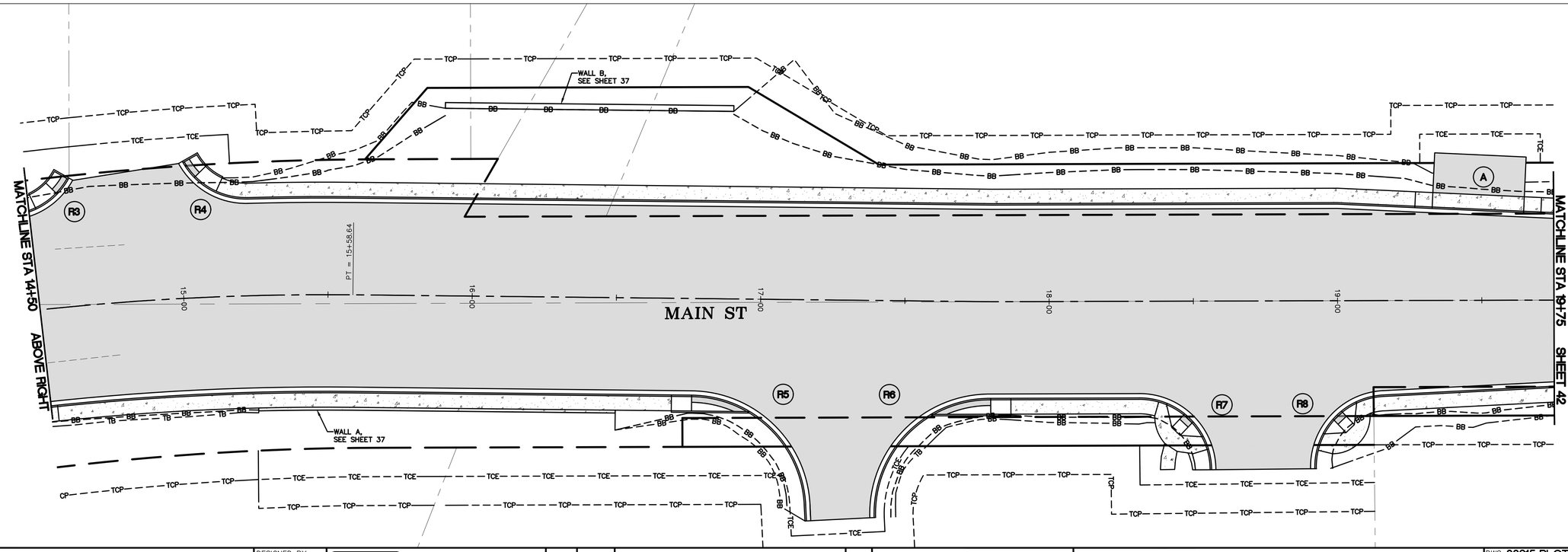
LEGEND

(RX) = RADII

(A) = DRIVEWAY

SEE SHEET 46 – 49 FOR CURB RAMP DETAILS

SEE SHEET 50 – 53 FOR DRIVEWAY GRADING DETAILS



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

TYLER ROSS EBBE
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	DRAWN BY	CHECKED BY
TRB	RGS	TRB

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NO.	DATE	DESCRIPTION	BY

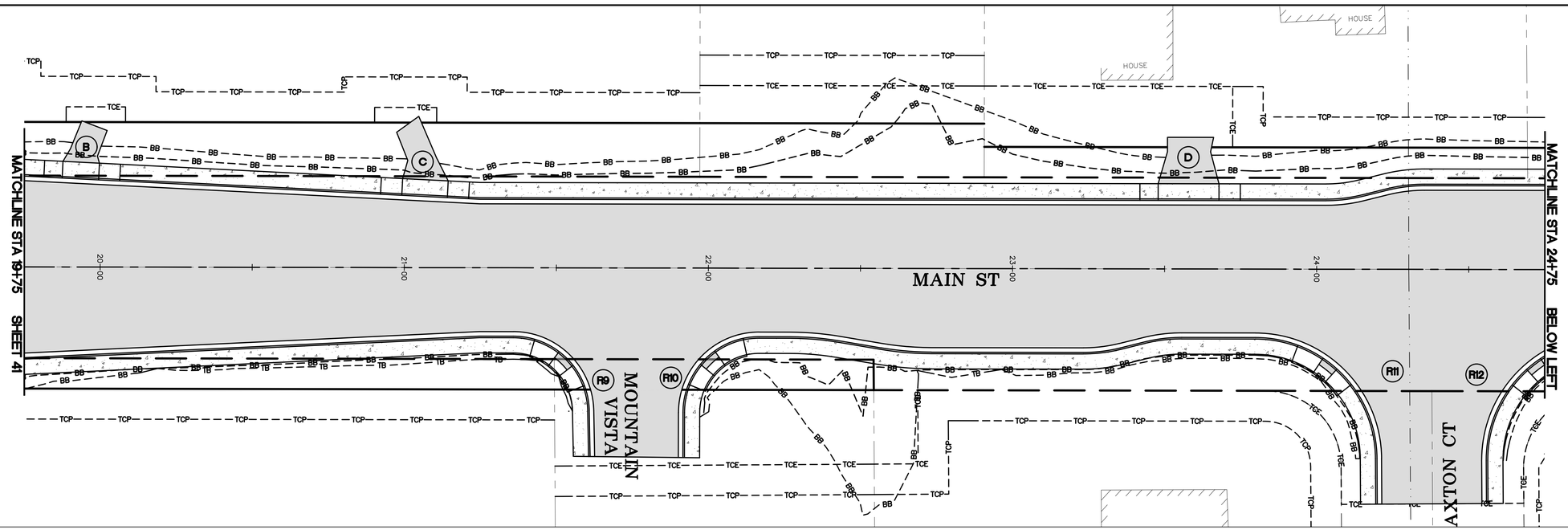
CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

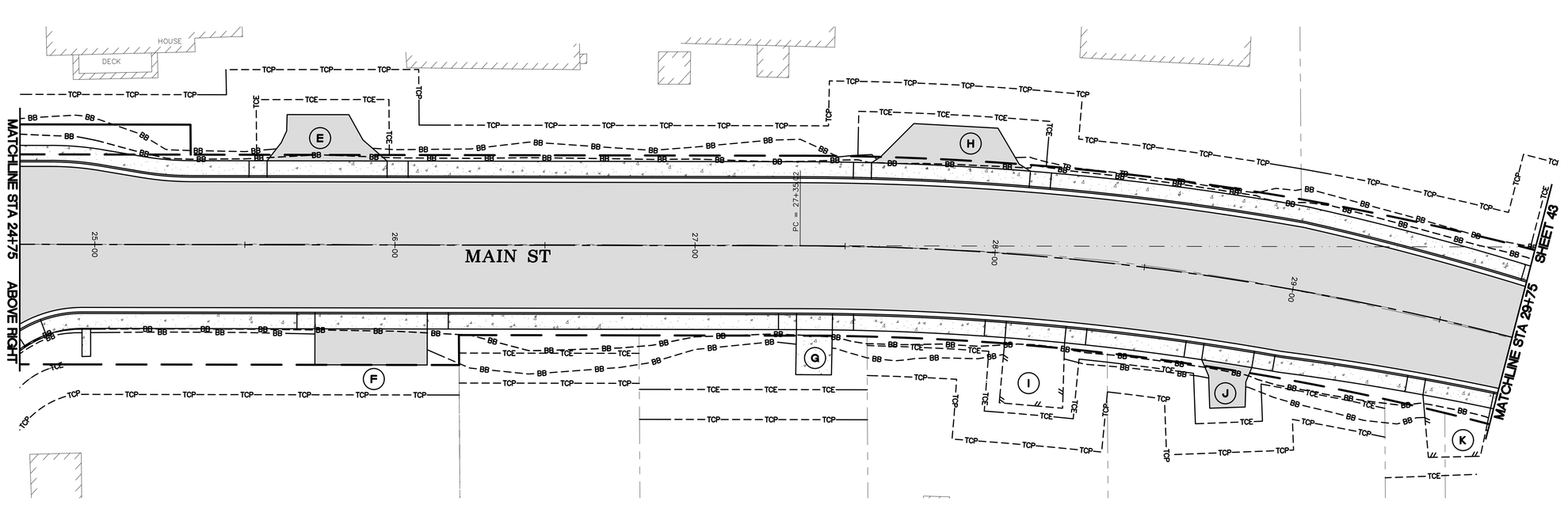
MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
GRADING PLAN - STA 10+00 TO 19+75

DWG	DATE
22015 PLOT	3/29/24

JOB#	SCALE	SHEET
22015	H: 1"=20' V: N/A	41 of 64

P:\Projects\22015\Cnst 3D 2021\22015 PLOT.dwg, 41 GRADING PLAN - STA 10+00 TO 19+75, 3/29/2024 3:30:42 PM, AutoCAD PDF (General Documentation).pc3





GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

LEGEND

(RX) = RADII

(A) = DRIVEWAY

SEE SHEET 46 – 49 FOR CURB RAMP DETAILS

SEE SHEET 50 – 53 FOR DRIVEWAY GRADING DETAILS

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RCS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
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Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS

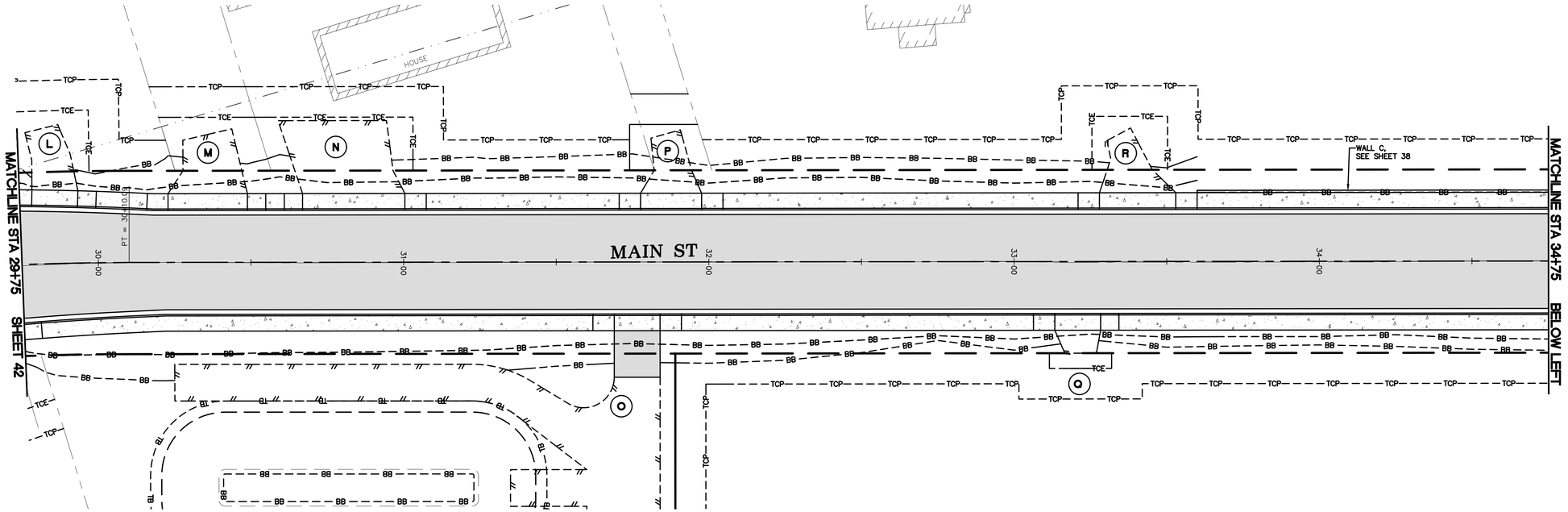
BARRETT ROAD TO OLD SETTLERS DRIVE

GRADING PLAN - STA 19+75 TO 29+75

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: N/A		SHEET 42 of 64

TYLER ROSS BEAN
STATE OF WASHINGTON
56224
REGISTERED PROFESSIONAL ENGINEER

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 02 GRADING PLAN - STA 19+75 TO 29+75, 3/29/2024 3:31:47 PM, , AutoCAD PDF (General Documentation).pc3



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

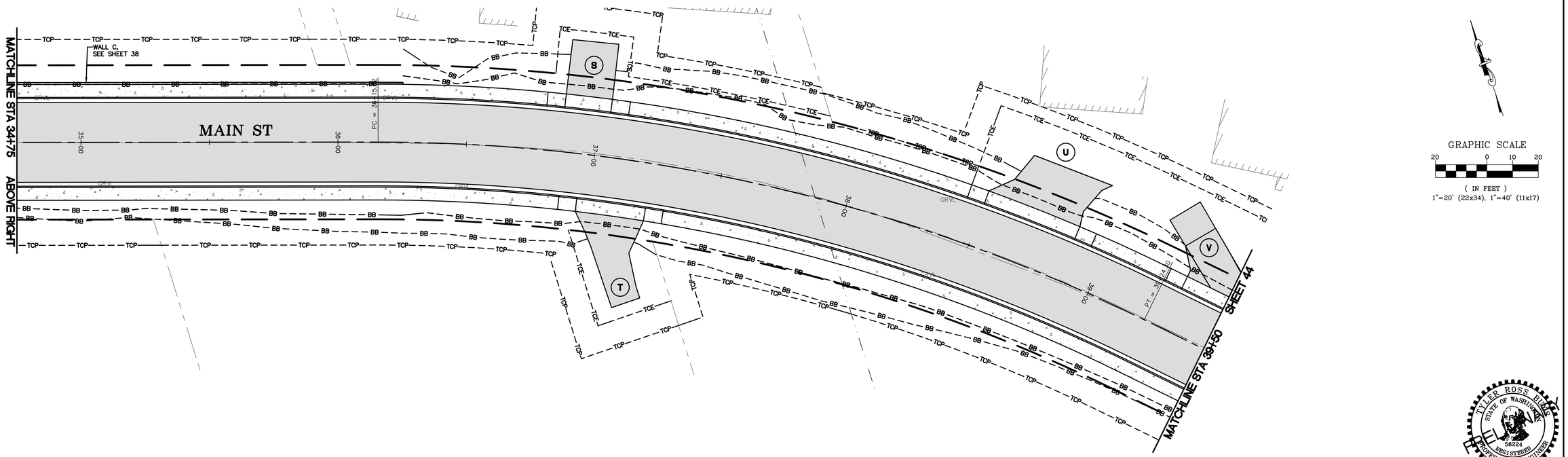
LEGEND

(RX) = RADII

(A) = DRIVEWAY

SEE SHEET 46 – 49 FOR CURB RAMP DETAILS

SEE SHEET 50 – 53 FOR DRIVEWAY GRADING DETAILS



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

TYLER ROSS EBBE STATE OF WASHINGTON 56224 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

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Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

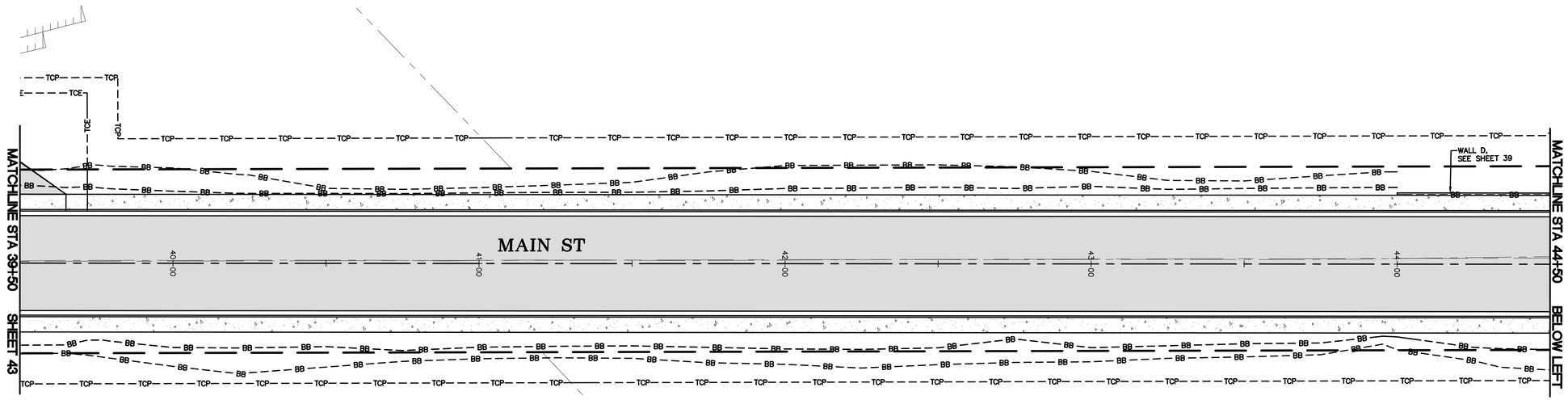
MAIN STREET IMPROVEMENTS

BARRETT ROAD TO OLD SETTLERS DRIVE

GRADING PLAN - STA 29+75 TO 39+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: N/A	SHEET 43 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 43 GRADING PLAN - STA 29+75 TO 39+50, 3/29/2024 3:32:52 PM, , AutoCAD PDF (General Documentation).pc3



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

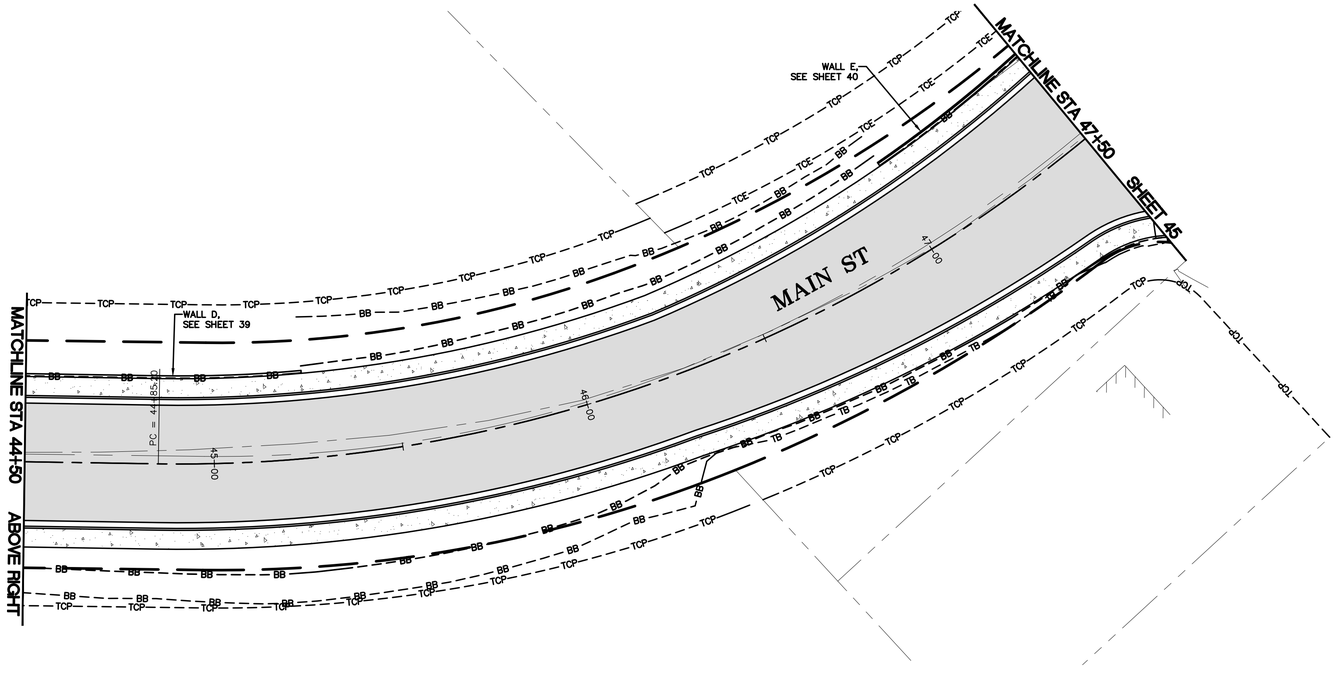
LEGEND

RX = RADII

A = DRIVEWAY

SEE SHEET 46 – 49 FOR CURB RAMP DETAILS

SEE SHEET 50 – 53 FOR DRIVEWAY GRADING DETAILS



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

TILLER ROSS EBEL
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

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CHECKED BY	TRB

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Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

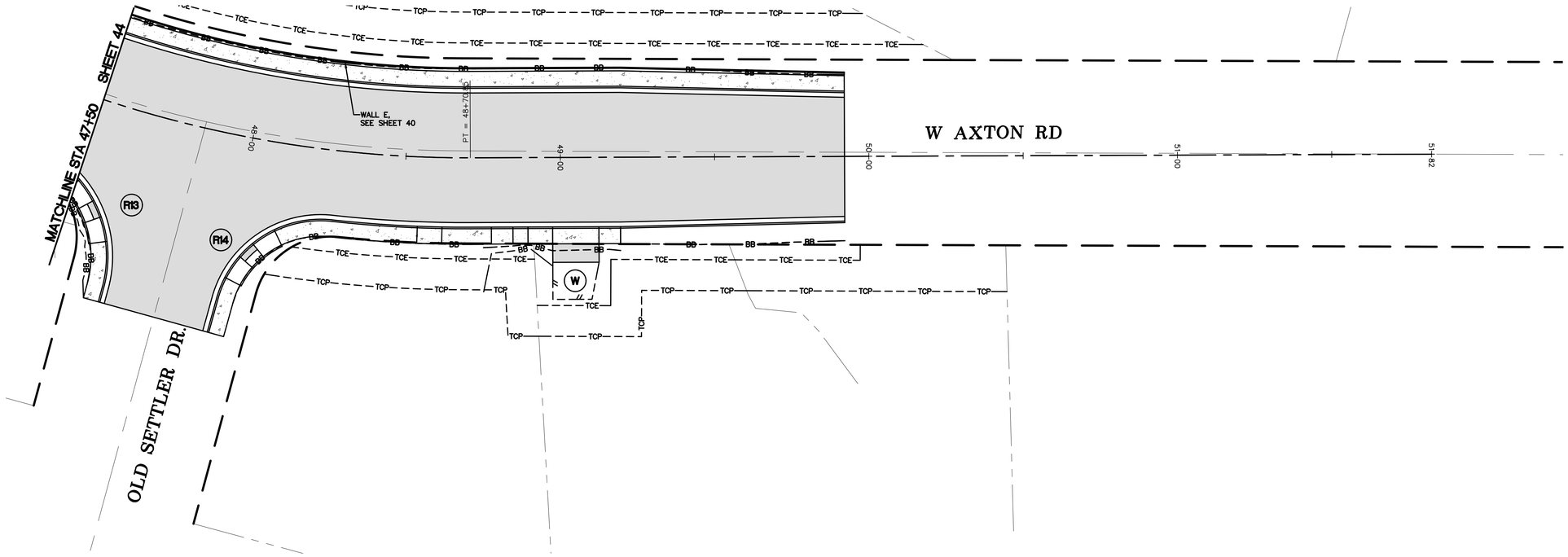
MAIN STREET IMPROVEMENTS

BARRETT ROAD TO OLD SETTLERS DRIVE

GRADING PLAN – STA 39+50 TO 47+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: N/A	SHEET 44 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg 44 GRADING PLAN - STA 39+50 TO 47+50, 3/29/2024 3:33:57 PM, AutoCAD PDF (General Documentation).pc3



GRAPHIC SCALE

20 0 10 20

(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

LEGEND

(RX) = RADII

(A) = DRIVEWAY

SEE SHEET 46 – 49 FOR CURB RAMP DETAILS

SEE SHEET 50 – 53 FOR DRIVEWAY GRADING DETAILS

TYLER ROSS EBEL
STATE OF WASHINGTON
56224
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

60% PLANS

DESIGNED BY TRB
DRAWN BY RGS
CHECKED BY TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

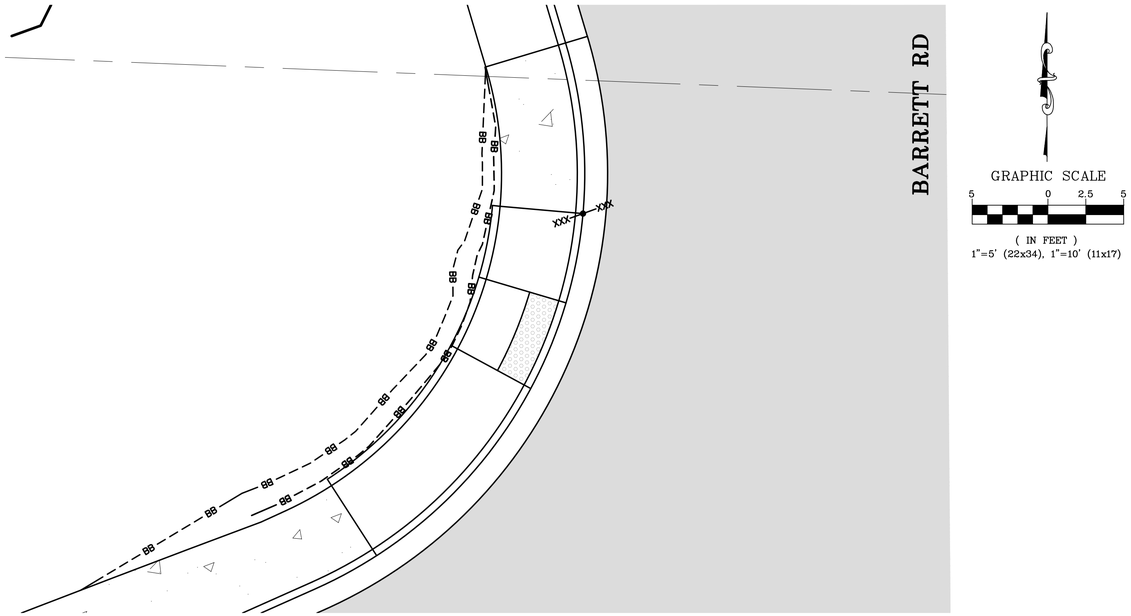
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
GRADING PLAN – STA 47+50 TO 52+00

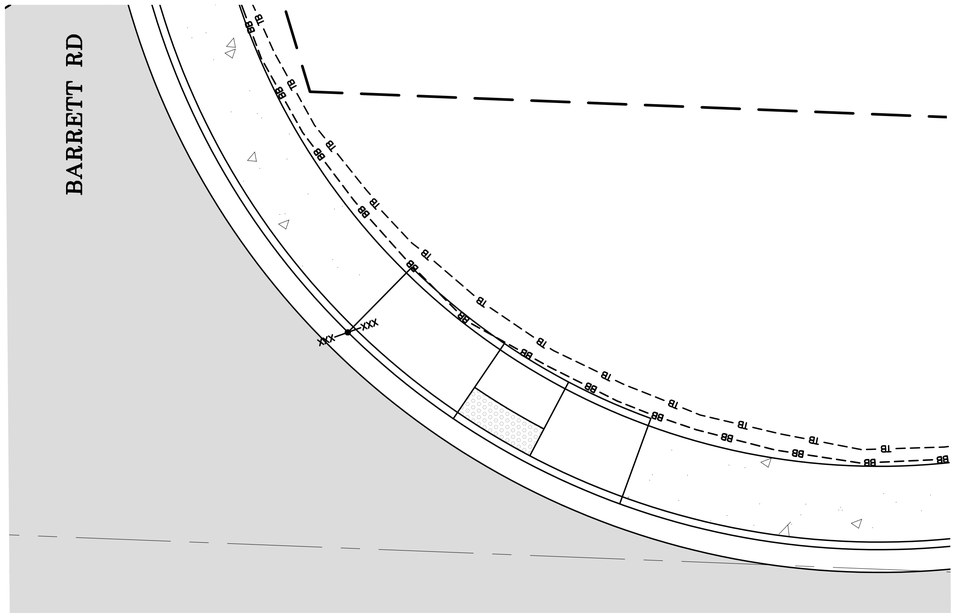
DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=20' V: N/A
SHEET 45 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg -45 GRADING PLAN - STA 47+50 TO 52+00, 3/29/2024 3:34:53 PM_ AutoCAD PDF (General Documentation).pc3



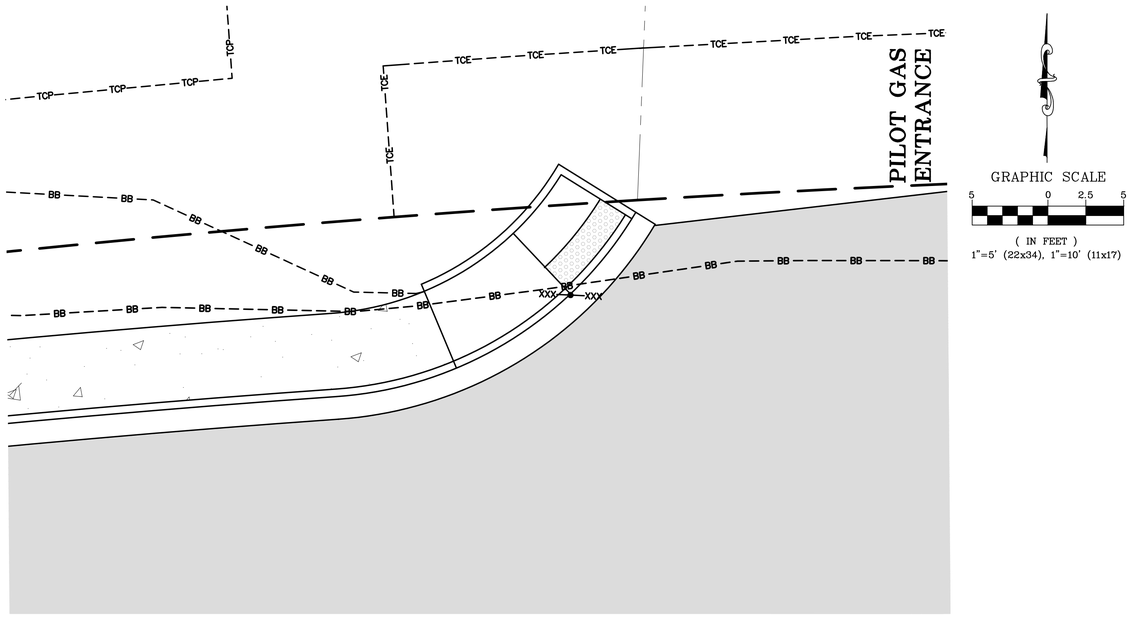
GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R1 CEMENT CONC. CURB RAMP TYPE PARALLEL A
SCALE: 1"=5'



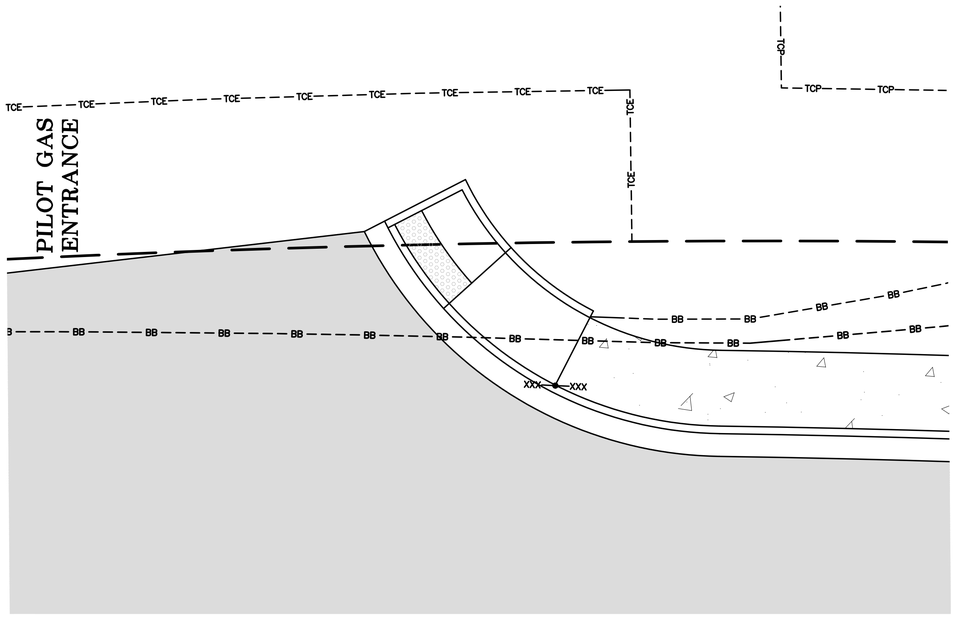
GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R2 CEMENT CONC. CURB RAMP TYPE PARALLEL A
SCALE: 1"=5'



GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R3 CEMENT CONC. CURB RAMP TYPE PARALLEL B
SCALE: 1"=5'



GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R4 CEMENT CONC. CURB RAMP TYPE PARALLEL B
SCALE: 1"=5'

TYLER ROSS EBE — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

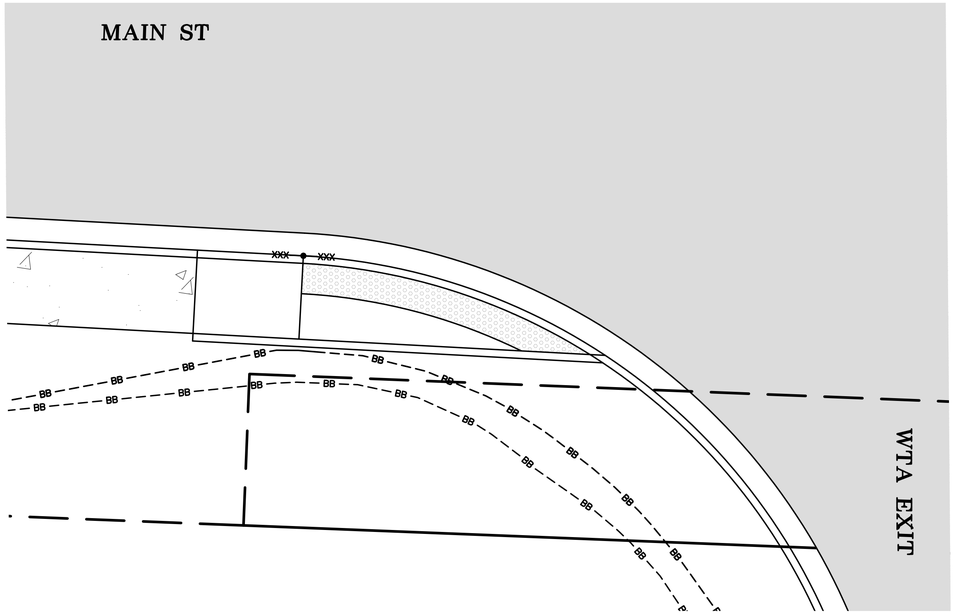
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
GRADING PLAN - CURB RAMPS R1-R4

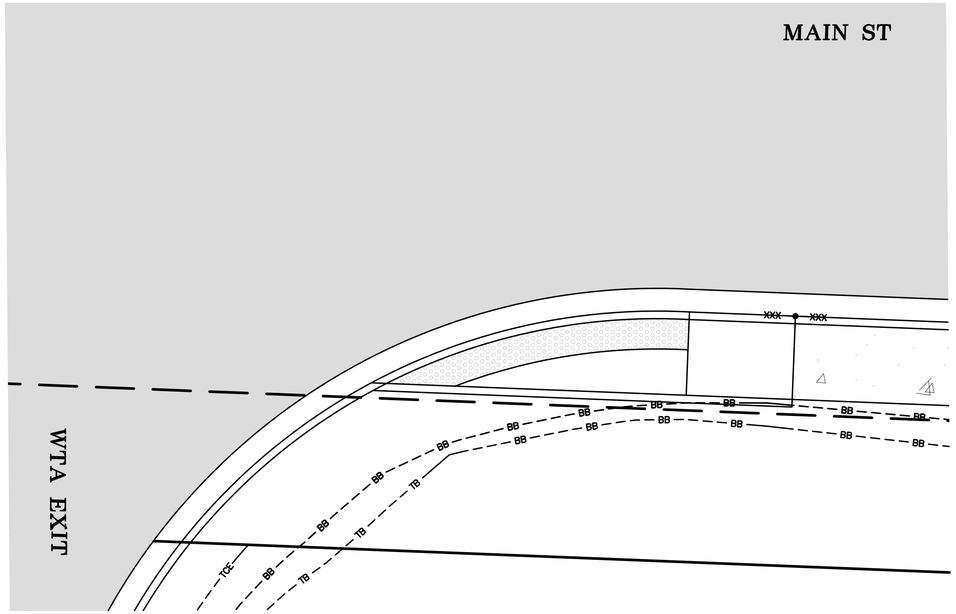
DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=5' V: N/A
SHEET 46 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 46 GRADING PLAN - CURB RAMPS R1-R4, 3/29/2024 3:35:54 PM, , AutoCAD PDF (General Documentation).pc3



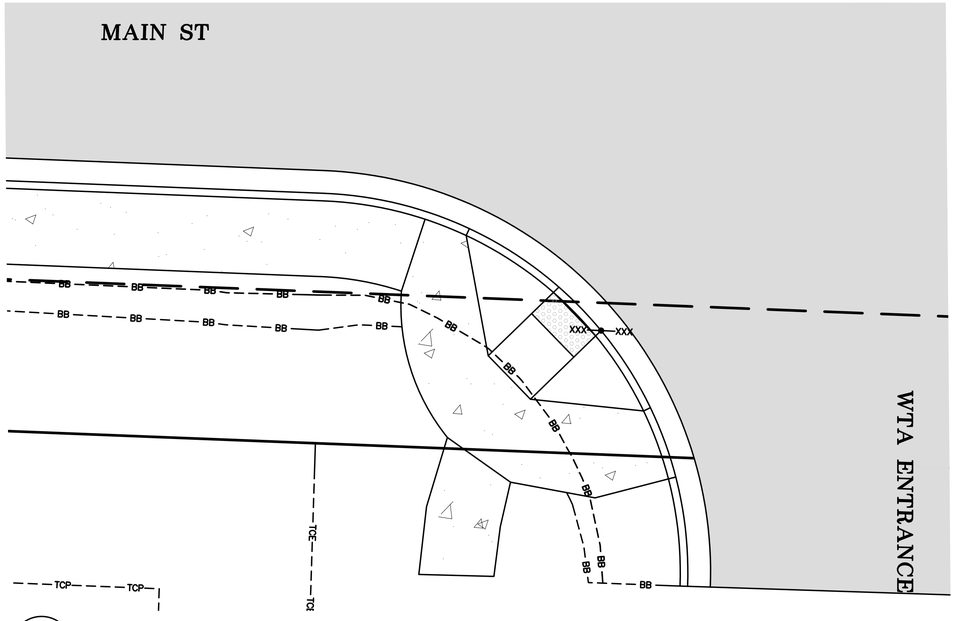
GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R5 CEMENT CONC. CURB RAMP TYPE SINGLE DIRECTION A
SCALE: 1"=5'



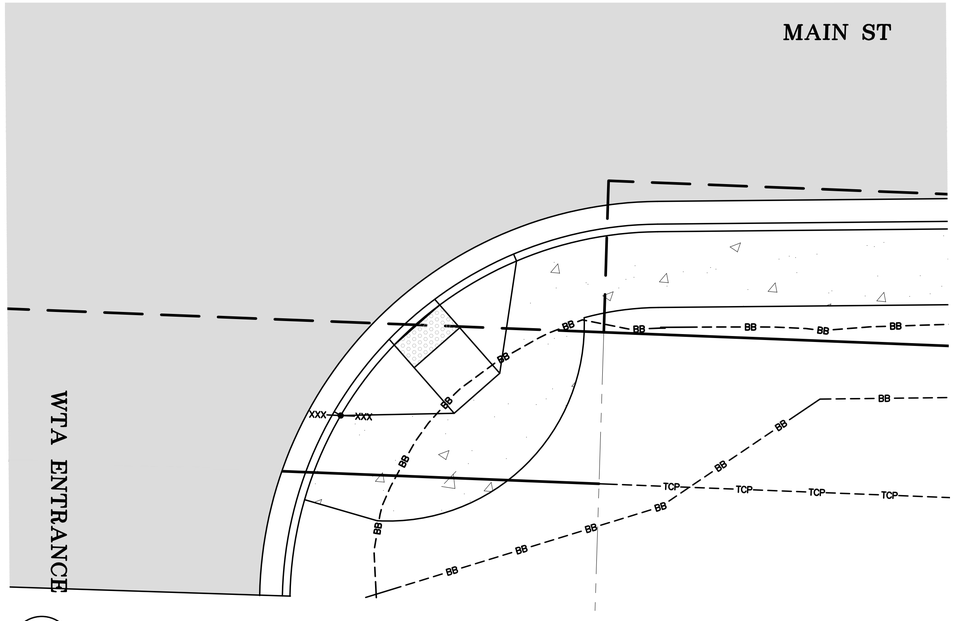
GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R6 CEMENT CONC. CURB RAMP TYPE SINGLE DIRECTION A
SCALE: 1"=5'



GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R7 CEMENT CONC. CURB RAMP TYPE PERPENDICULAR A
SCALE: 1"=5'



GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R8 CEMENT CONC. CURB RAMP TYPE PERPENDICULAR A
SCALE: 1"=5'

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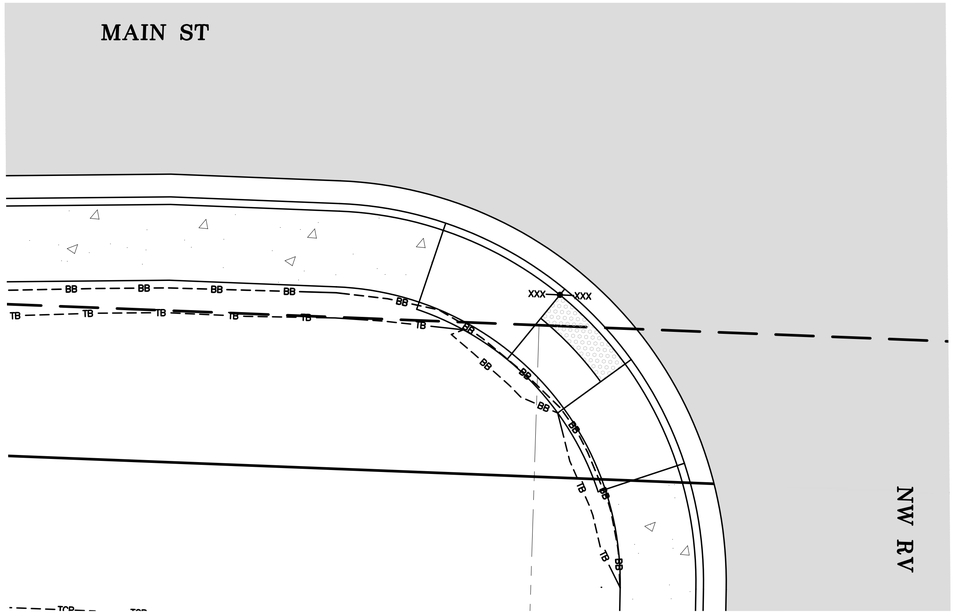
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
GRADING PLAN - CURB RAMPS R5-R8

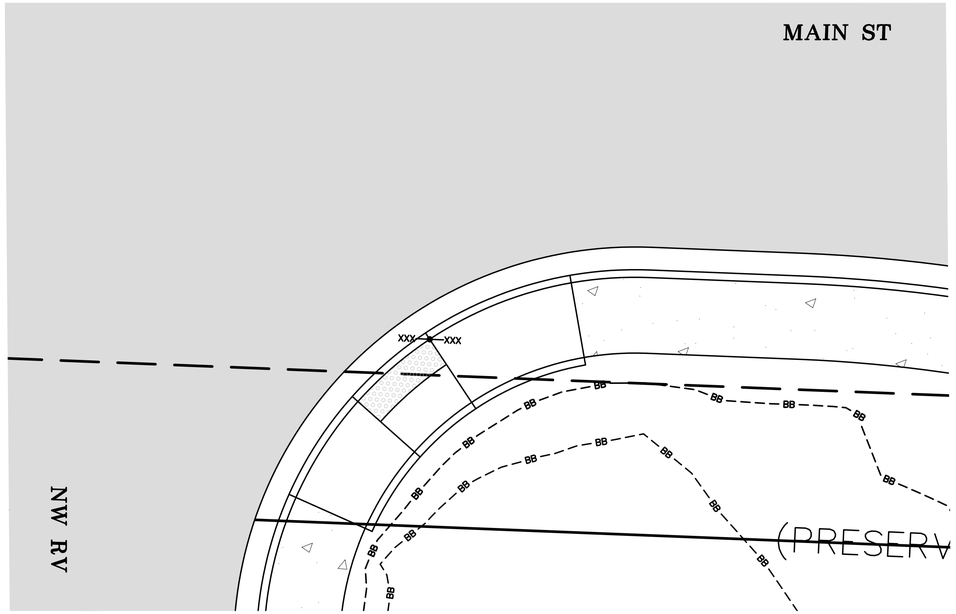
DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=5' V: N/A
SHEET 47 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 47 GRADING PLAN - CURB RAMPS R5-R8, 3/29/2024 3:37:11 PM, , AutoCAD PDF (General Documentation).pc3



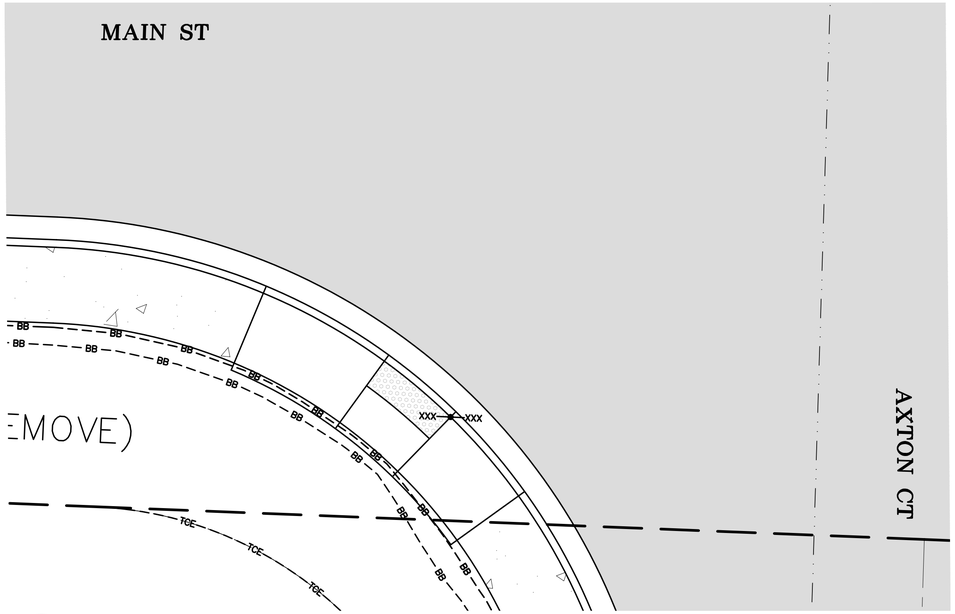
GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R9 CEMENT CONC. CURB RAMP TYPE PARALLEL A
SCALE: 1"=5'



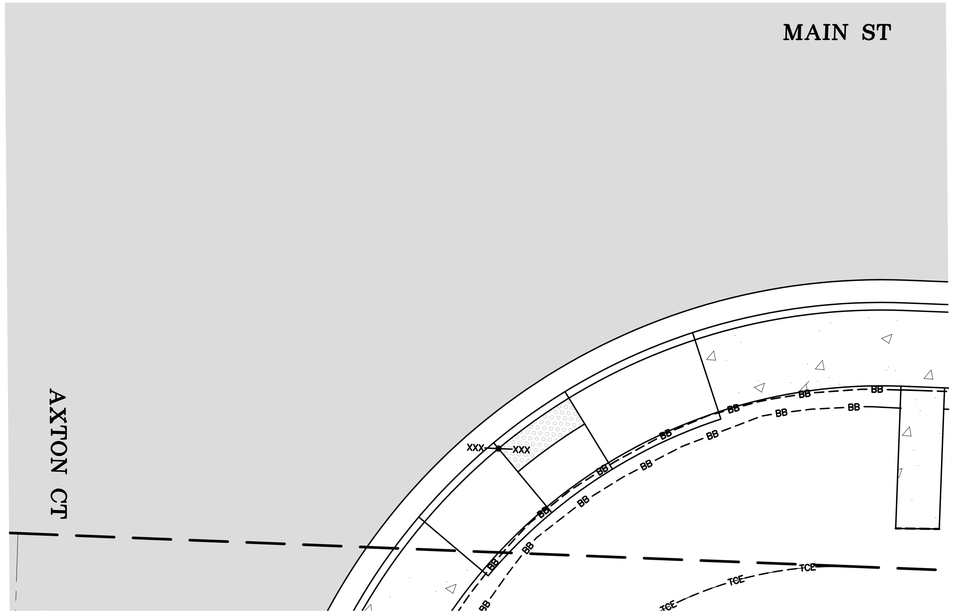
GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R10 CEMENT CONC. CURB RAMP TYPE PARALLEL A
SCALE: 1"=5'



GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R11 CEMENT CONC. CURB RAMP TYPE PARALLEL A
SCALE: 1"=5'



GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R12 CEMENT CONC. CURB RAMP TYPE PARALLEL A
SCALE: 1"=5'

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STATE OF WASHINGTON
56224
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CHECKED BY TRB

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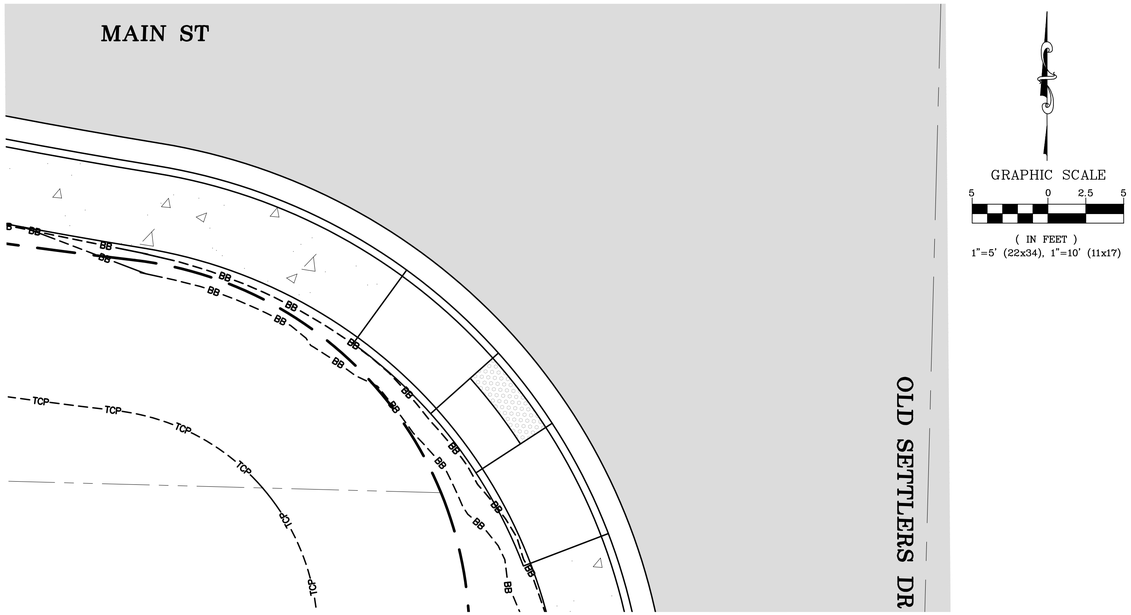
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
GRADING PLAN - CURB RAMPS R9-R12

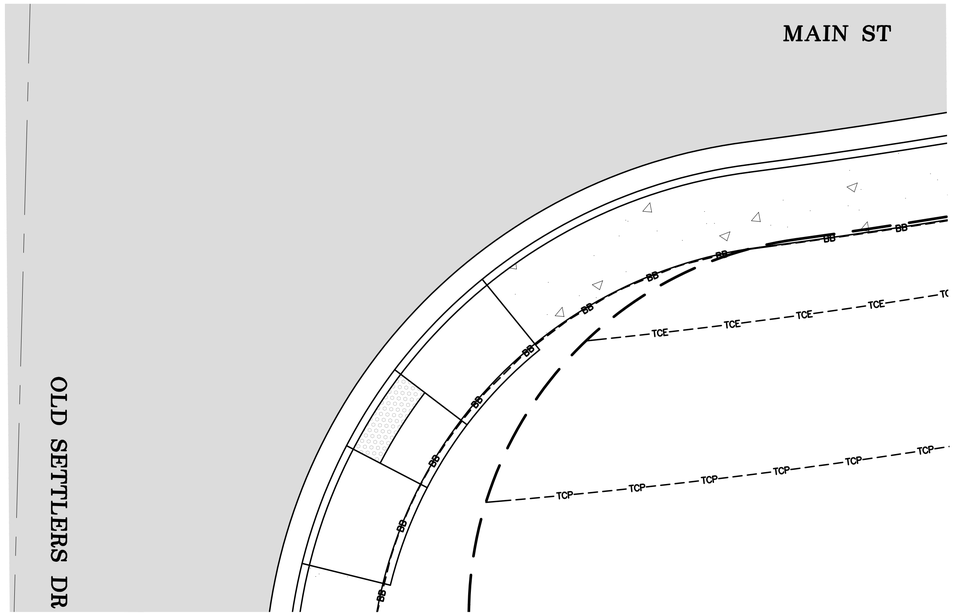
DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=5' V: N/A
SHEET 48 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 48 GRADING PLAN - CURB RAMPS R9-R12, 3/29/2024 3:38:33 PM, AutoCAD PDF (General Documentation).pc3



GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R13 CEMENT CONC. CURB RAMP TYPE PARALLEL A
SCALE: 1"=5'



GRAPHIC SCALE
5 0 2.5 5
(IN FEET)
1"=5' (22x34), 1"=10' (11x17)

R14 CEMENT CONC. CURB RAMP TYPE PARALLEL A
SCALE: 1"=5'

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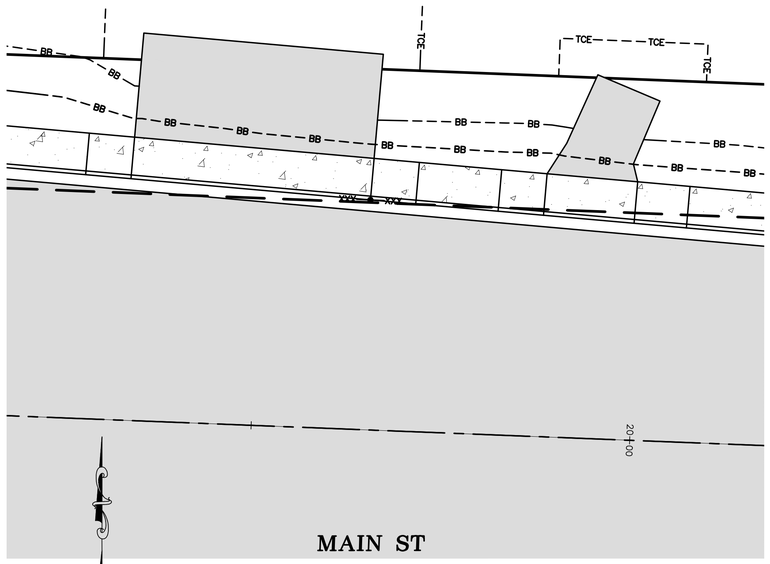
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
GRADING PLAN - CURB RAMPS R13-R14

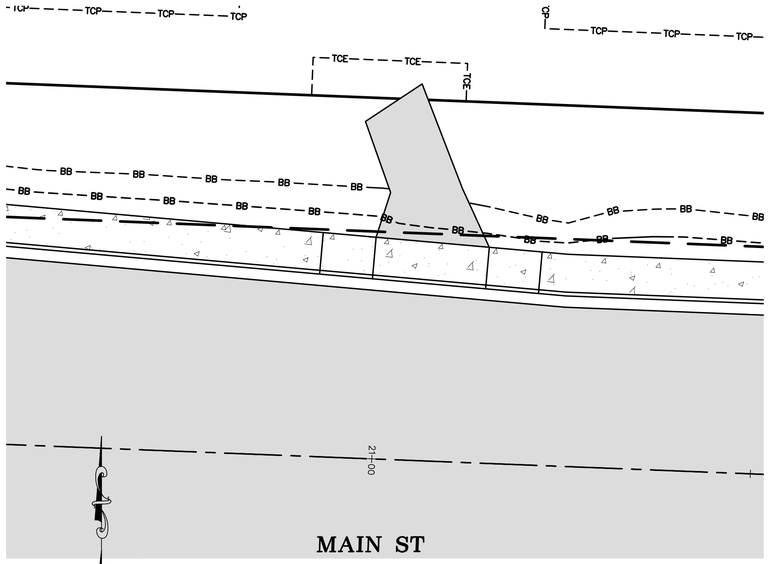
DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=5' V: N/A
SHEET 49 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg -R1 GRADING PLAN - CURB RAMPS R13-R14, 3/29/2024 3:39:39 PM, _AutoCAD PDF (General Documentation).pc3



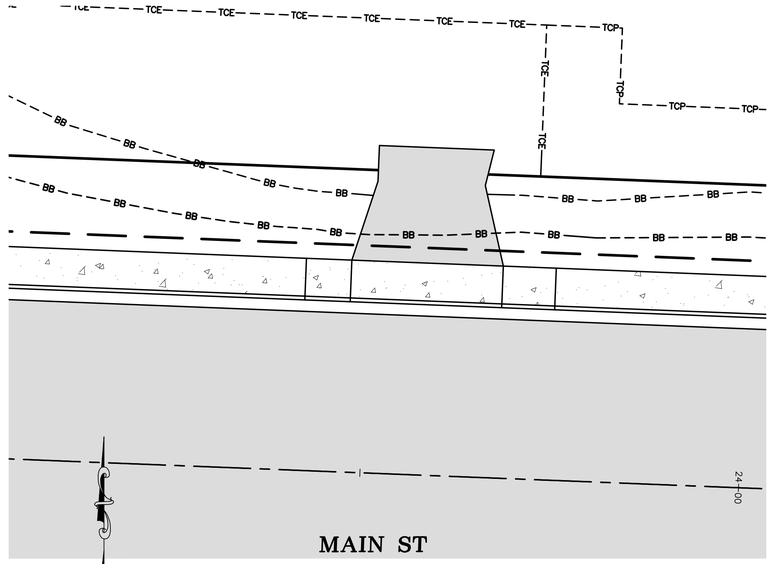
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAYS A+B
STA 19+49 LT + 19+94 LT
1628 MAIN ST



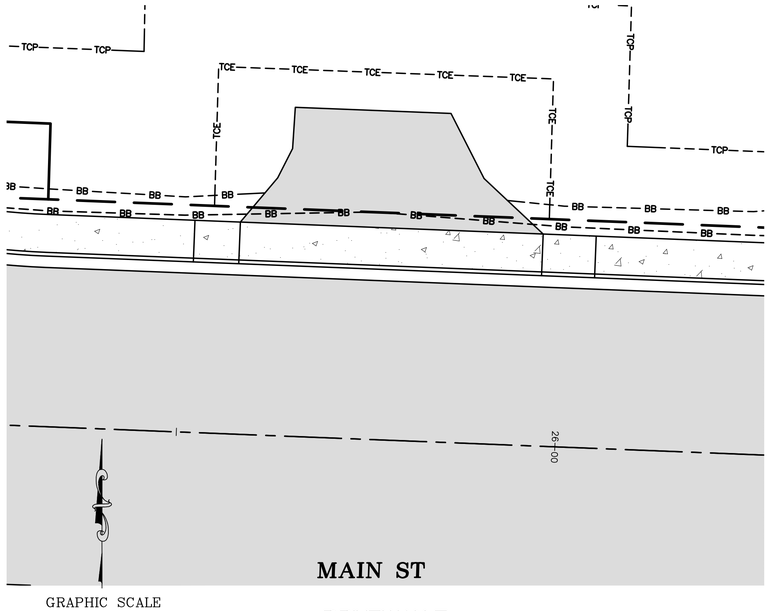
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY C
STA 20+07 LT
1628 MAIN ST



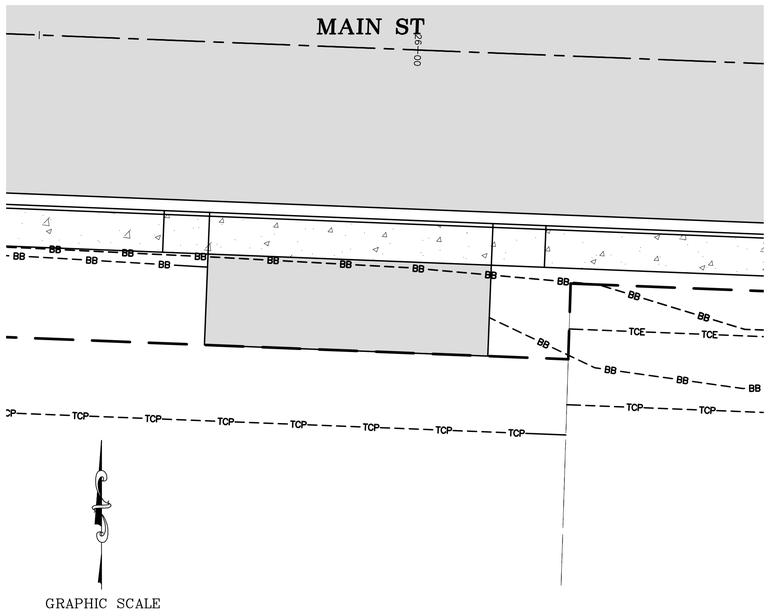
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY D
STA 23+58 LT
1600 MAIN ST



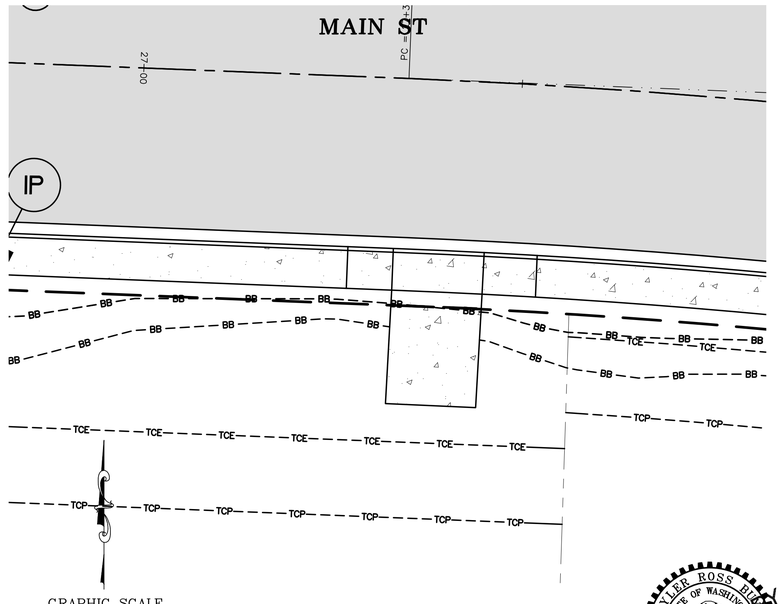
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY E
STA 25+77 LT
1580 MAIN ST



GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY F
STA 25+92 RT
1595 MAIN ST



GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY G
STA 27+40 RT
1575 MAIN ST

TYLER ROSS BEARD
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

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Lynden, WA 98264 (360) 354-3687

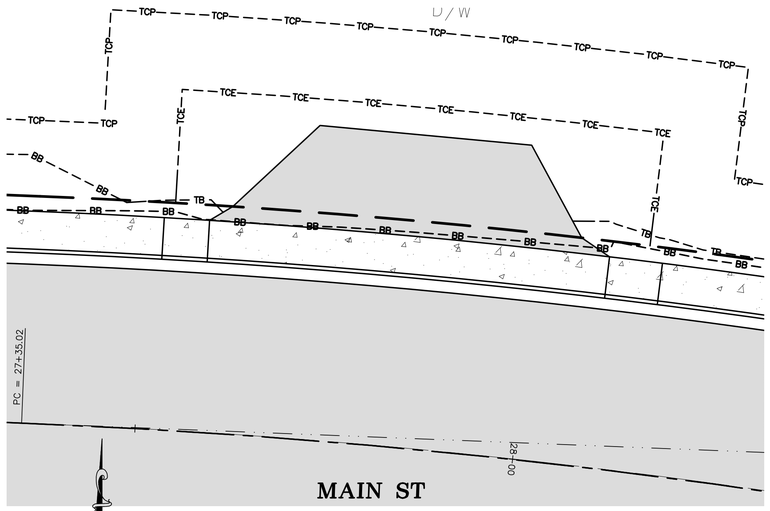
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
DRIVEWAYS A-G

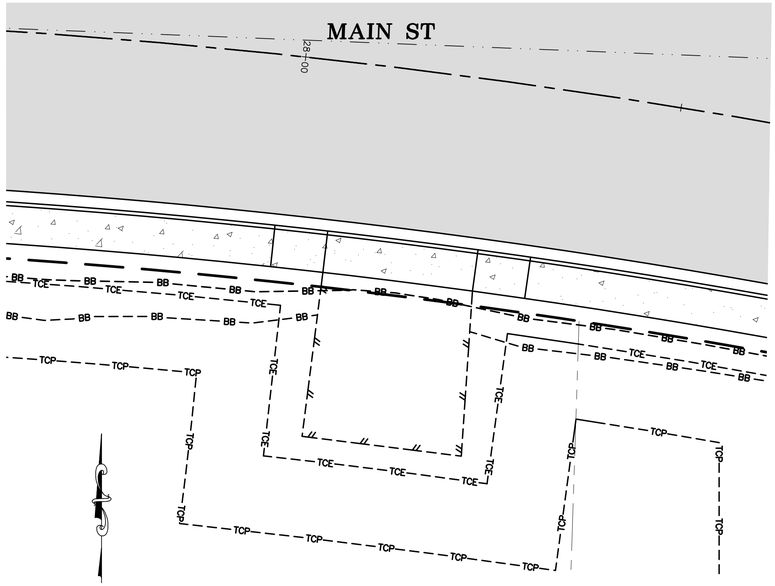
DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=10' V: N/A		SHEET 50 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 3D DRIVEWAYS A-G, 3/29/2024 3:40:56 PM, , AutoCAD PDF (General Documentation).pc3



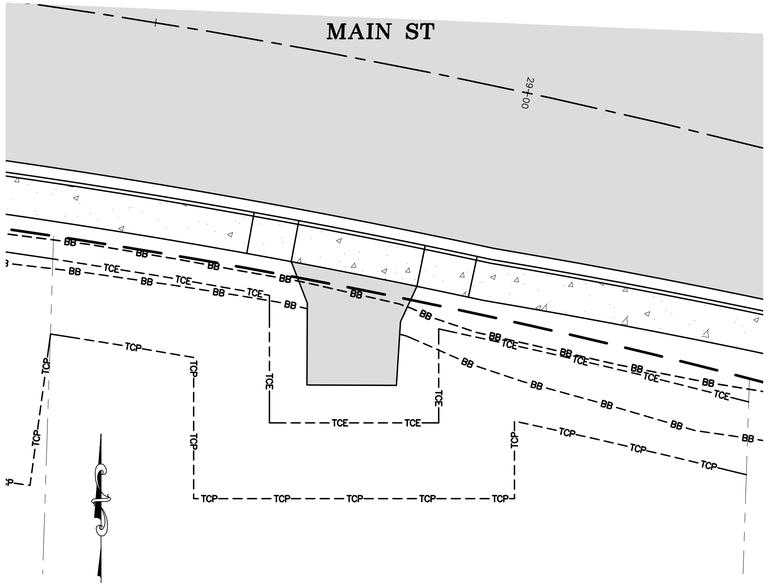
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY H
STA 27+84 LT
1580 MAIN ST



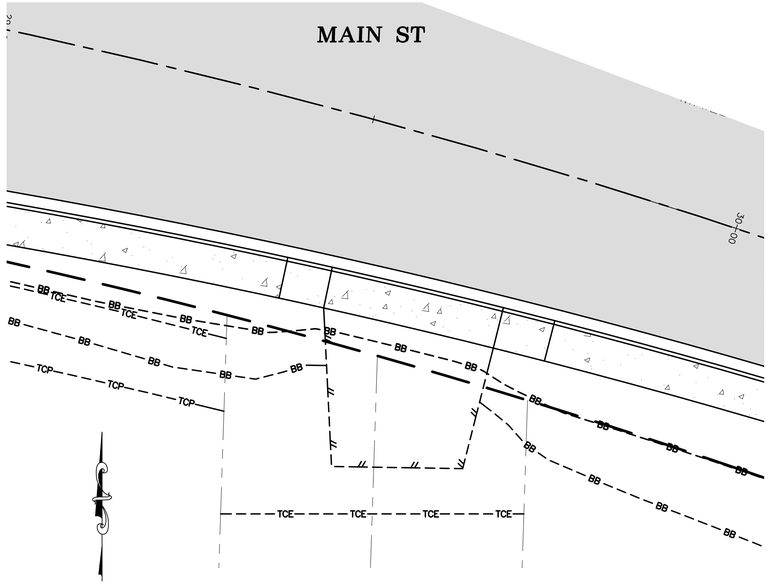
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY I
STA 28+16 RT
1573 MAIN ST



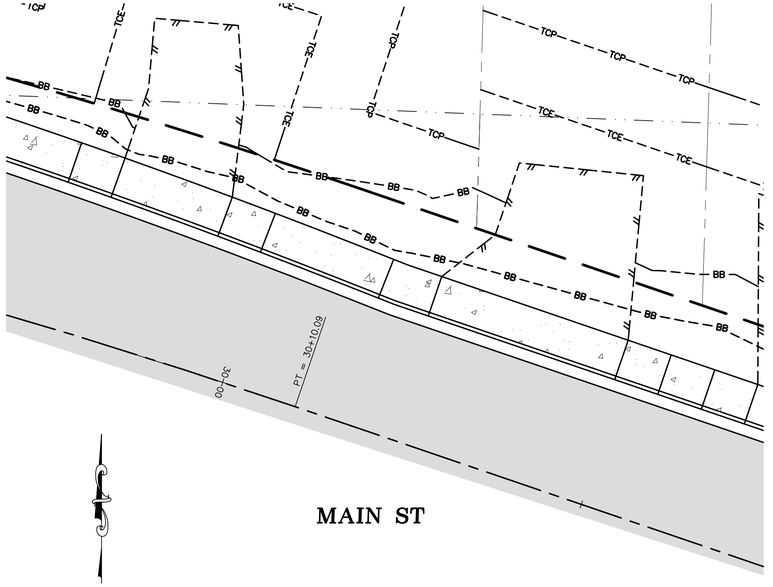
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY J
STA 28+82 RT
1567 MAIN ST



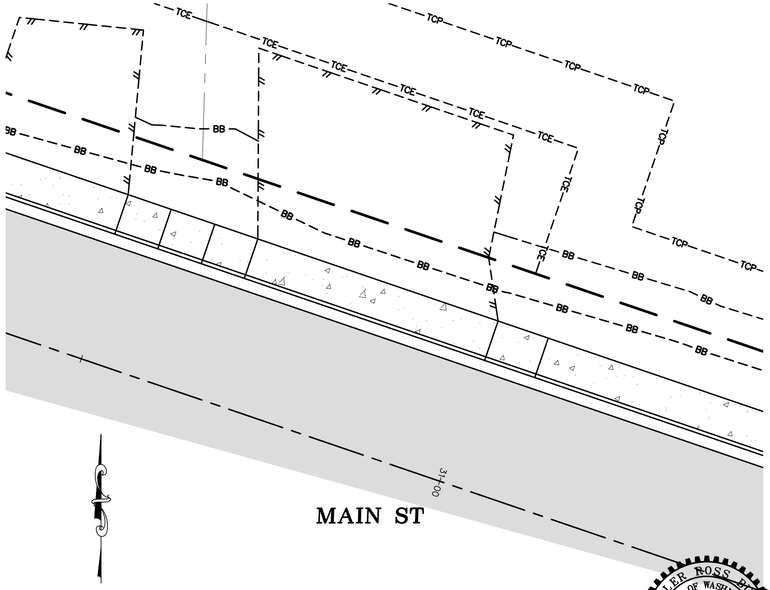
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY K
STA 29+62 RT
1565 MAIN ST



GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAYS L + M
STA 29+86 LT + 30+36 LT
1560 + 1554 MAIN ST



GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY N
STA 30+84 LT
1600 MAIN ST

TILLER ROSS EBE
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

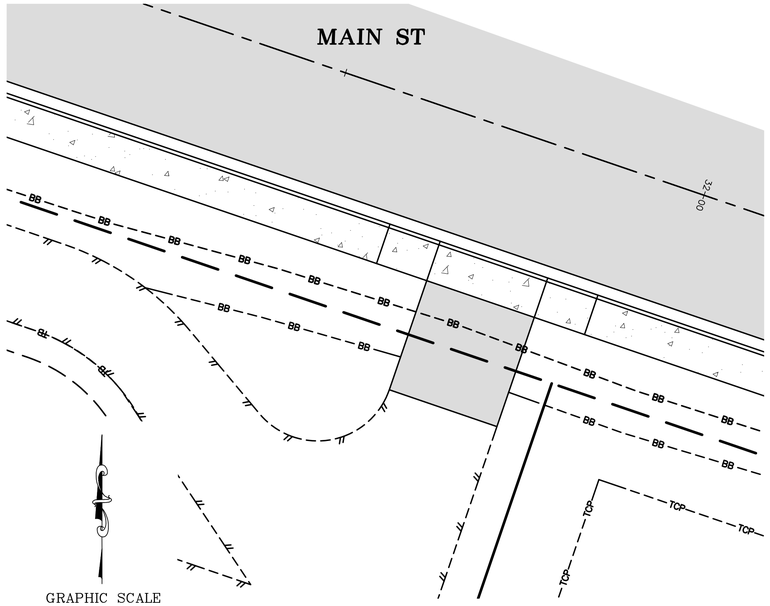
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

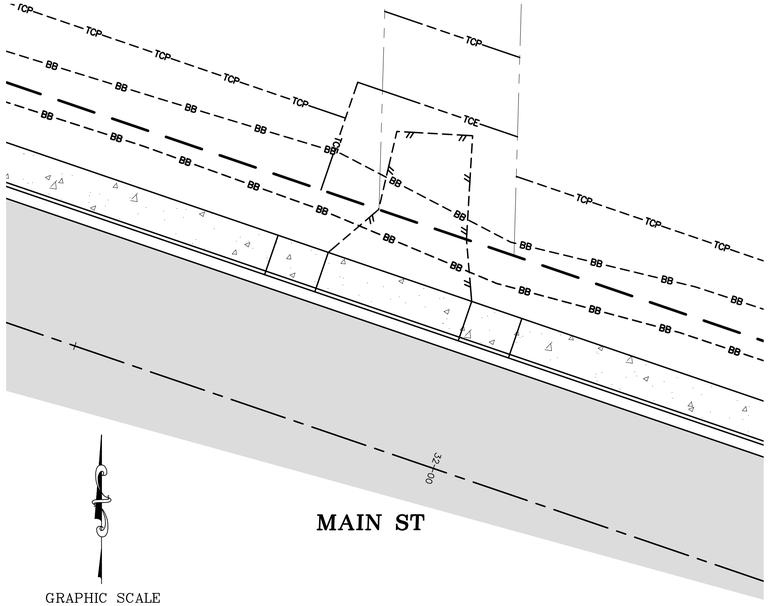
MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
DRIVEWAYS H-N

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=10'	V: N/A	SHEET 51 of 64

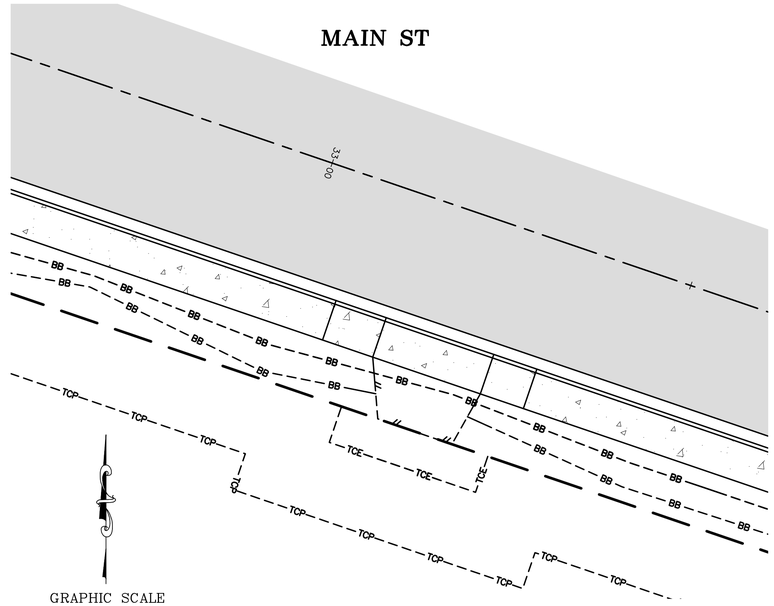
P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 51 DRIVEWAYS H-N, 3/29/2024 3:42:51 PM, AutoCAD PDF (General Documentation).pc3



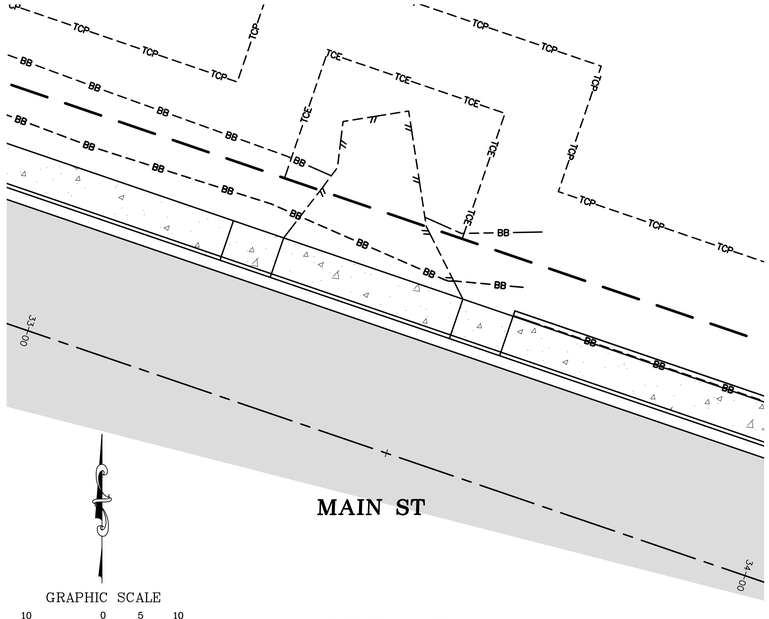
DRIVEWAY O
STA 31+77 RT
1537 MAIN ST



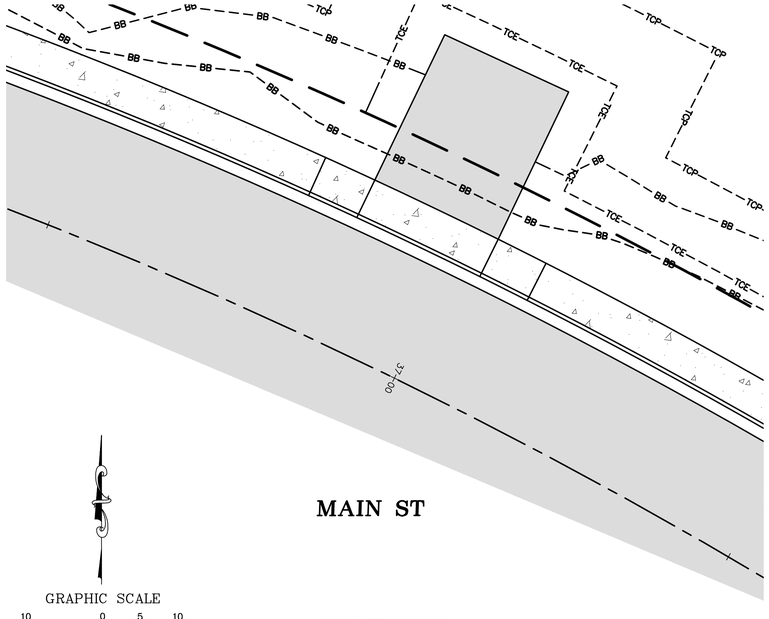
DRIVEWAY P
STA 31+88 LT
1540 MAIN ST



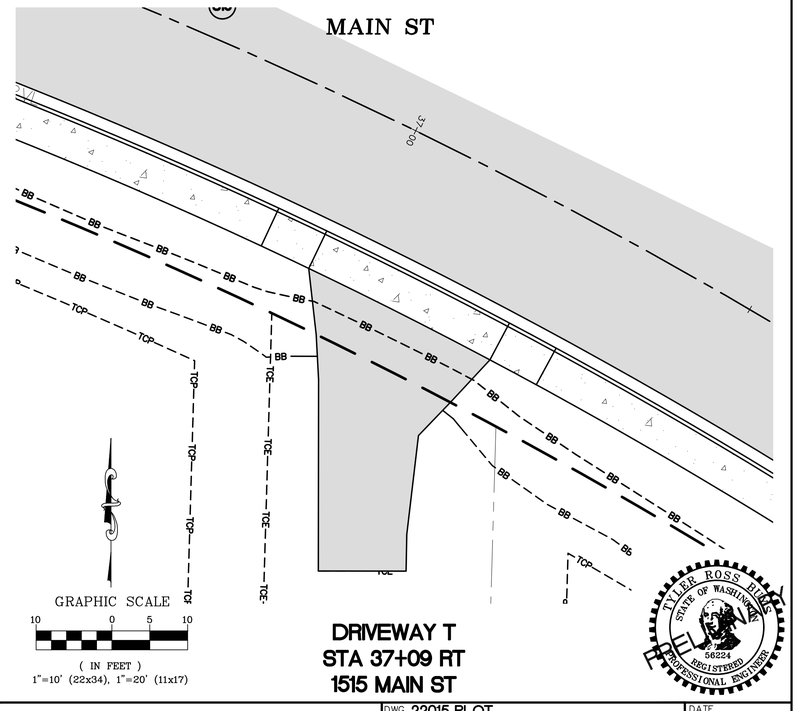
DRIVEWAY Q
STA 33+21 RT
1537 MAIN ST



DRIVEWAY R
STA 33+40 LT
1538 MAIN ST



DRIVEWAY S
STA 36+95 LT
1516 MAIN ST



DRIVEWAY T
STA 37+09 RT
1515 MAIN ST

60% PLANS

DESIGNED BY	DRAWN BY	CHECKED BY
TRB	RGS	TRB

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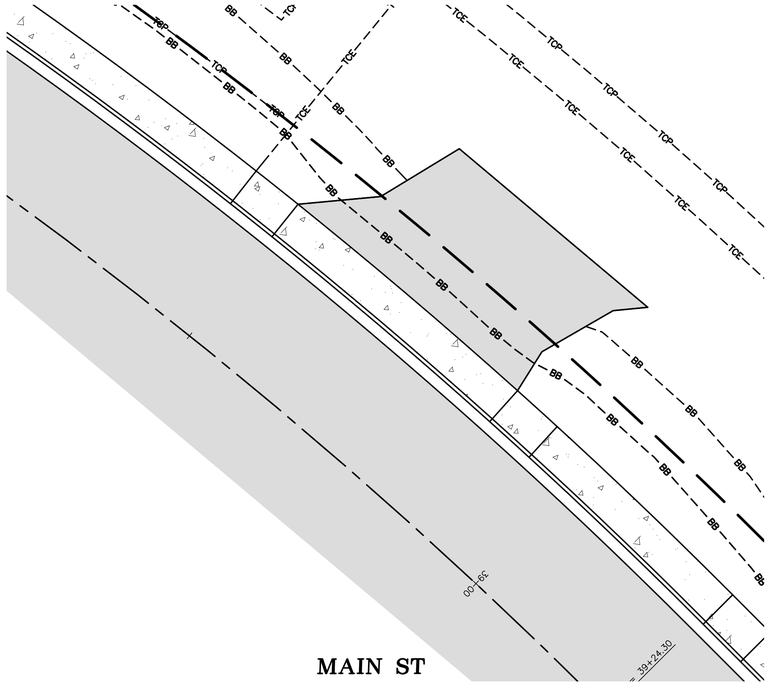
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
DRIVEWAYS O-T

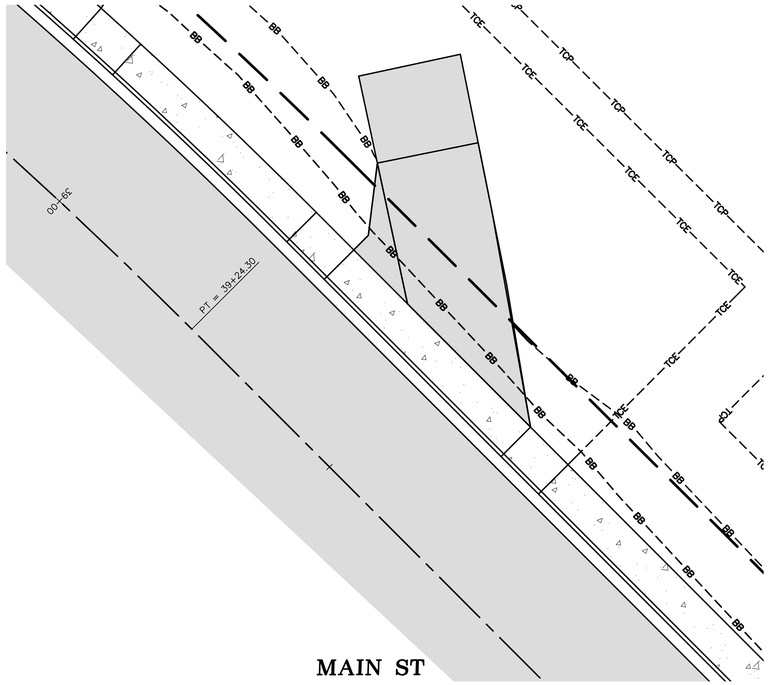
DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=10' V: N/A
SHEET 52 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 52 DRIVEWAYS O-T, 3/29/2024 3:44:47 PM, AutoCAD PDF (General Documentation).pc3



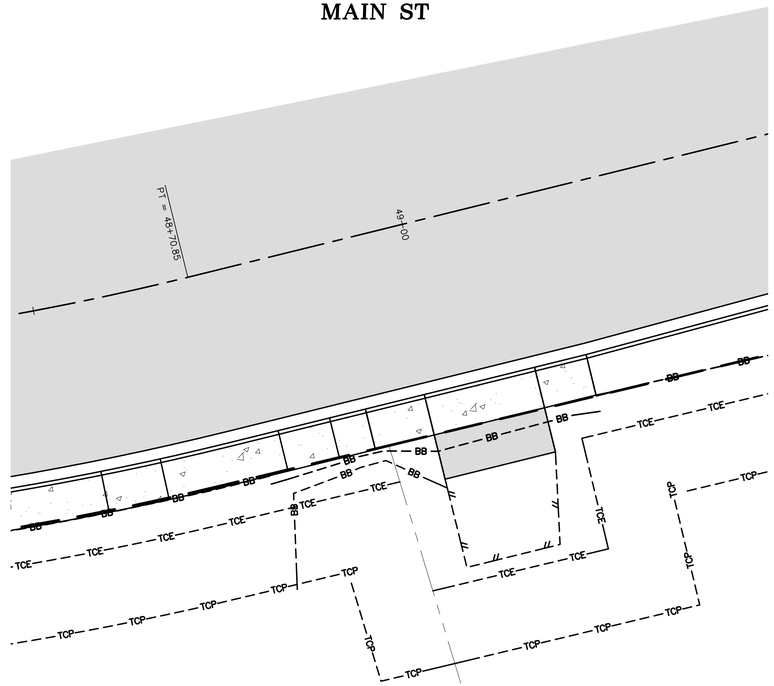
GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY U
STA 38+69 LT
1496 MAIN ST



GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY V
STA 39+49 LT
1496 MAIN ST



GRAPHIC SCALE
10 0 5 10
(IN FEET)
1"=10' (22x34), 1"=20' (11x17)

DRIVEWAY W
STA 49+05 RT
1425 W. AXTON RD

TYLER ROSS EBBS
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY TRB
DRAWN BY RGS
CHECKED BY TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

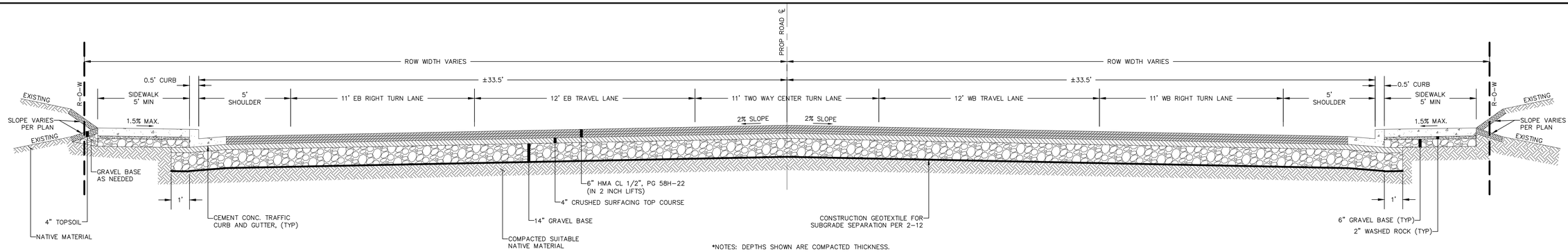
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
DRIVEWAYS U-W

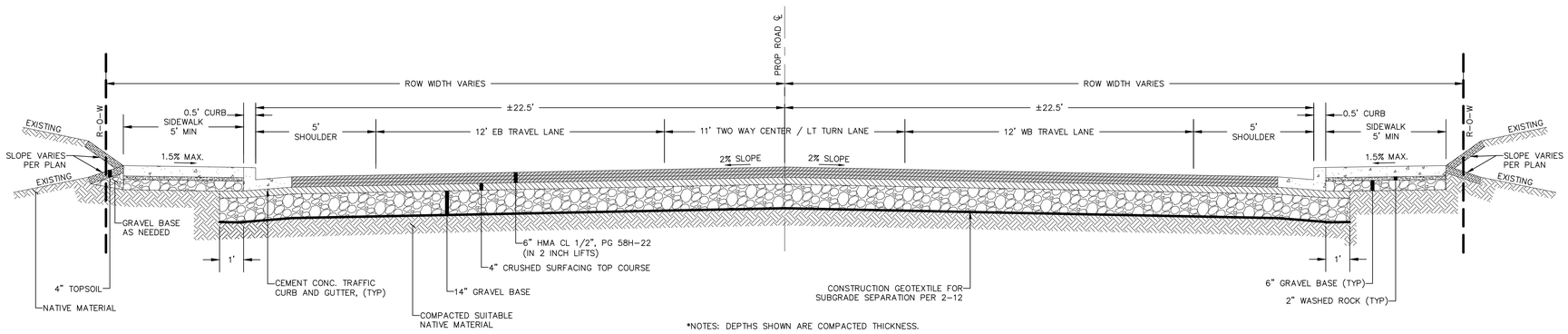
DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=10' V: N/A
SHEET 53 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 53 DRIVEWAYS U-W, 3/29/2024 3:46:16 PM, , AutoCAD PDF (General Documentation).pc3



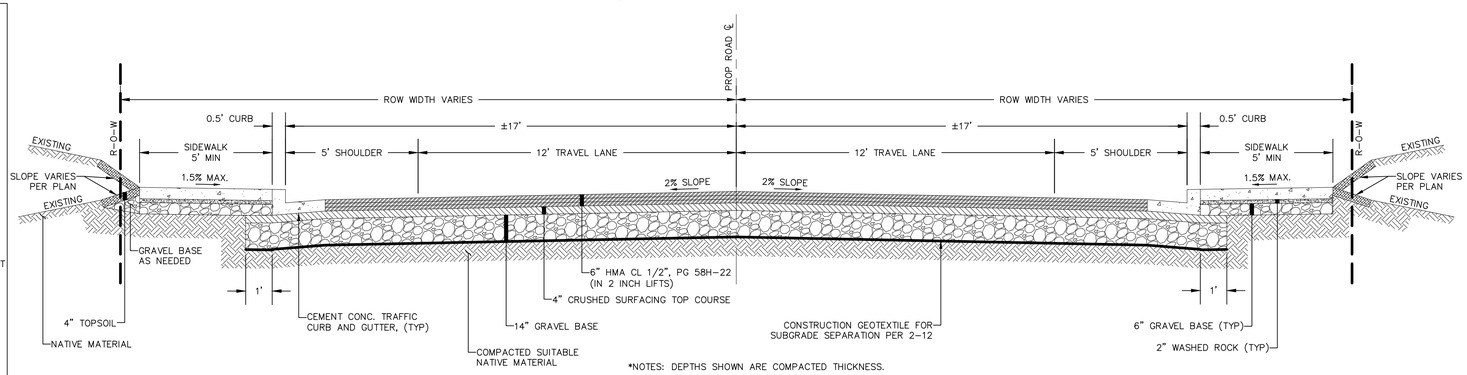
*NOTES: DEPTHS SHOWN ARE COMPACTED THICKNESS.

MAIN STREET
(STA. 11+00 TO STA. 19+00)
NTS



*NOTES: DEPTHS SHOWN ARE COMPACTED THICKNESS.

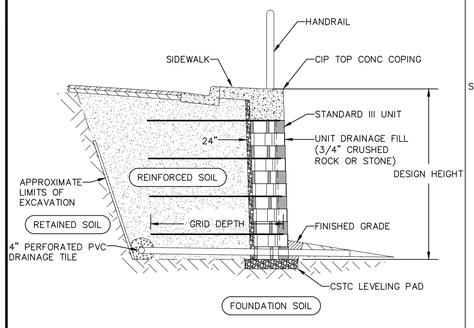
MAIN STREET
(STA. 19+00 TO STA. 29+00)
(STA. 46+25 TO STA. 49+92)
NTS



*NOTES: DEPTHS SHOWN ARE COMPACTED THICKNESS.

MAIN STREET
(STA. 29+00 TO STA. 46+25)
NTS

NOTE:
WHEN SITE CONDITIONS REQUIRE, WRAP DRAINAGE TILE IN 3/4" AGGREGATE AND FILTER FABRIC WITH DRAINAGE COMPOSITE OR AGGREGATE BACK DRAIN SYSTEM, AS DIRECTED BY GEOTECHNICAL ENGINEER. REINFORCED SOIL IS GRAVEL BACKFILL FOR WALL. FOUNDATION SOIL IS CSTC AND SUBGRADE.



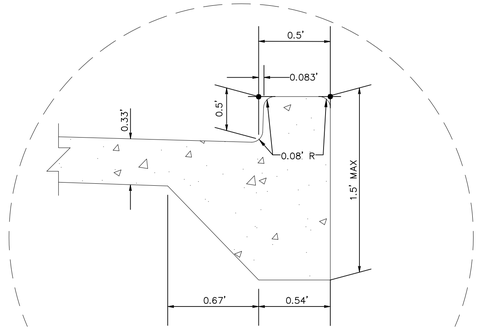
TYPICAL REINFORCED WALL SECTION
NTS

STANDARD UNIT - NEAR VERTICAL SETBACK

PRELIMINARY
TYLER ROSS FIRMS
STATE OF WASHINGTON
56224
REGISTERED PROFESSIONAL ENGINEER

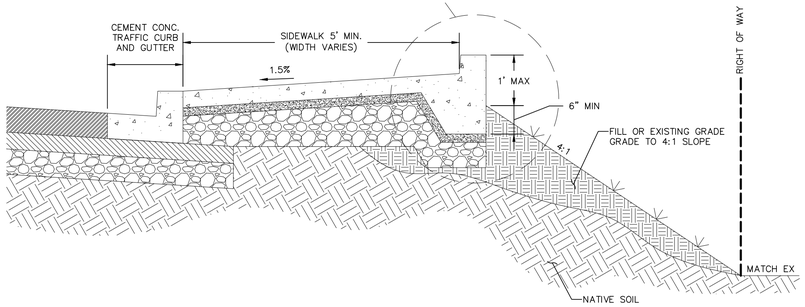
60% PLANS	DESIGNED BY TRB DRAWN BY RGS CHECKED BY TRB	R&E Reichhardt & Ebe ENGINEERING INC P.O. Box 978 | 423 Front Street Lynden, WA 98264 (360) 354-3687	NO.	DATE	DESCRIPTION	BY	CITY OF FERNDALE 2095 MAIN ST FERNDALE, WA 98248	MAIN STREET IMPROVEMENTS BARRETT ROAD TO OLD SETTLERS DRIVE TYPICAL SECTIONS	DWG 22015 PLOT JOB# 22015 SCALE H: N/A V: N/A DATE 3/29/24 SHEET 54 of 64

P:\Projects\22015\Civil 3D 2021\22015 PLOT.dwg, 54 TYPICAL SECTIONS, 3/29/2024 3:47:09 PM, , AutoCAD PDF (General Documentation).pc3

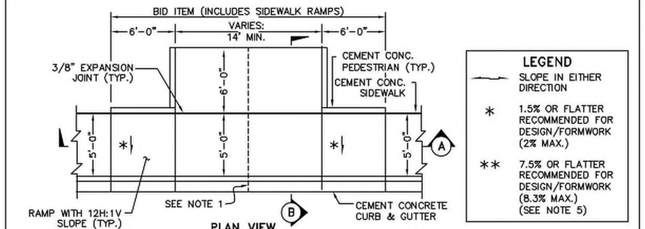


____" RAISED EDGE MONOLITHIC CEMENT CONCRETE CURB AND SIDEWALK

NTS



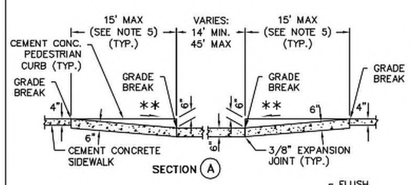
TYPICAL SECTION W/ MONOLITHIC CURB, RAISED SIDEWALK EDGE AND FILL



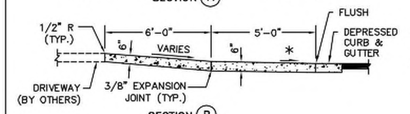
PLAN VIEW

LEGEND

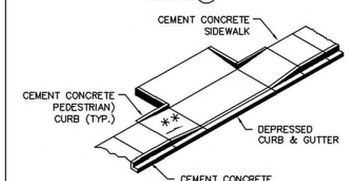
- SLOPE IN EITHER DIRECTION
- * 1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX.)
- ** 7.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (8.3% MAX.) (SEE NOTE 5)



SECTION (A)



SECTION (B)



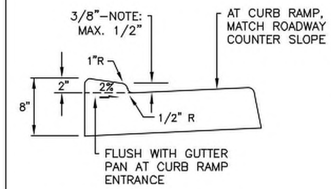
NOTES:

1. WHEN THE DRIVEWAY WIDTH EXCEEDS 15 FEET, CONSTRUCT A FULL DEPTH EXPANSION JOINT WITH 3/8" JOINT FILLER ALONG THE DRIVEWAY CENTERLINE. CONSTRUCT EXPANSION JOINTS PARALLEL WITH THE CENTER-LINE AS REQUIRED AT 15' MAXIMUM SPACING WHEN DRIVEWAY WIDTH EXCEED 30'.
2. AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF DRIVEWAY ENTRANCES.
3. CEMENT CONCRETE SHALL BE CLASS A 4000 PSI
4. WHERE "GRADE BREAK" IS CALLED OUT, THE ENTIRE LENGTH OF THE LINE BETWEEN THE TWO ADJACENT SURFACE PLANES SHALL BE FLUSH.
5. THE PEDESTRIAN RAMP LENGTH IS NOT REQUIRED TO EXCEED 15 FEET. WHEN APPLYING THE 15-FOOT MAX. LENGTH (MEASURED FROM BACK OF SIDEWALK) THE RUNNING SLOPE OF THE PEDESTRIAN RAMP IS ALLOWED TO EXCEED 8.3% USE A SINGLE CONSTANT SLOPE FROM BOTTOM OF RAMP TO TOP OF RAMP TO MATCH INTO THE SIDEWALK OVER A HORIZONTAL DISTANCE OF 15 FEET.

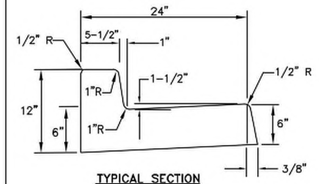
REFERENCE: WSDOT STD PLAN F-80.10-04

NOVEMBER 25, 2016

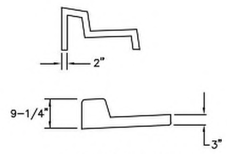
CITY OF FERNDALE WASHINGTON	APPROVED Public Works Director — 8/11/17 Date	CEMENT CONCRETE DRIVEWAY ENTRANCE STANDARD DETAIL R-6 NOT TO SCALE



CURB RAMP/DRIVEWAY SECTION



TYPICAL SECTION



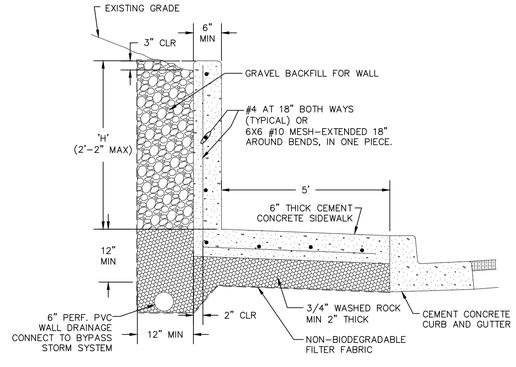
CONTRACT JOINTS

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 MINIMUM 3/16" BITUMINOUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EDGED.
2. 2" WEEP HOLES TO BE PLACED ON EACH SIDE OF DRIVEWAY SECTION & A MAXIMUM 60' C/C IN CUT SECTIONS WHERE SIDEWALK DRAIN NOT REQUIRED BY PUBLIC WORKS DIRECTOR.
3. 3/8" EXPANSION JOINTS TO BE PLACED AT DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS, & COLD JOINTS OR A MAXIMUM OF 80' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF GUTTER.
4. CONCRETE SHALL BE CEMENT CONCRETE "CLASS 3000".
5. FINISHED WORK SHALL NOT VARY MORE THAN 1/8" IN GRADE AND 1/4" IN ALIGNMENT WHEN CHECKED WITH A 10' STRAIGHT EDGE.
6. EXPOSED SURFACES SHALL BE BRUSHED WITH A FIBER HAIR BRUSH.
7. WHITE PIGMENTED OR TRANSPARENT CURING COMPOUND SHALL BE APPLIED AS OUTLINED IN THE STANDARD SPECIFICATIONS.
8. FURTHER REQUIREMENTS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

NOVEMBER 25, 2016

CITY OF FERNDALE WASHINGTON	APPROVED Public Works Director — 8/11/17 Date	CURB AND GUTTER INSTALLATION STANDARD DETAIL R-9 NOT TO SCALE

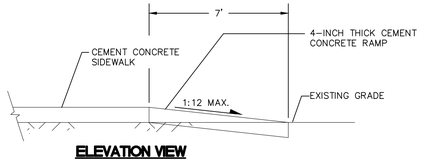


NOTES:

1. PLACE JOINTS AS FOR SIDEWALKS OR AS DIRECTED BY THE ENGINEER.
2. 'H' TO BE AS DIRECTED BY ENGINEER. REBAR NOT REQUIRED FOR WALL PLACED ON LIGHT BASES OR WHERE 'H'<14".
3. ¾" CHAMFER AT EXPOSED CORNERS.
4. NO REBAR REQUIRED FOR AN HEIGHT OF 6"

____" MONOLITHIC RETAINING WALL AND SIDEWALK (TYP)

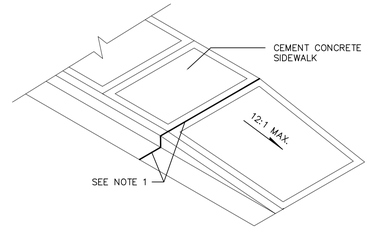
NTS



ELEVATION VIEW

NOTES

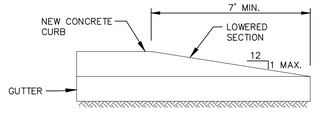
1. 3/8" EXPANSION JOINT.
2. SIDEWALK RAMPS SHALL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES, EXCEPT AT END OF RAMP ADJACENT TO ROADWAY.



ISOMETRIC VIEW

SIDEWALK END RAMP

NTS



NOTE:
CONCRETE CURB END SECTION SHALL BE USED AT ALL LOCATIONS WHERE NEW CURB DOES NOT MEET EXISTING CURB, AT SIDEWALK TRANSITION SECTIONS AND/OR AS DIRECTED IN THE FIELD.

CONCRETE CURB END SECTION

NTS

TYLER ROSS EBBE — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
GRADING DETAILS 1

DWG 22015 DETAILS			DATE 3/29/24
JOB# 22015	SCALE H: N/A	V: N/A	SHEET 55 of 64

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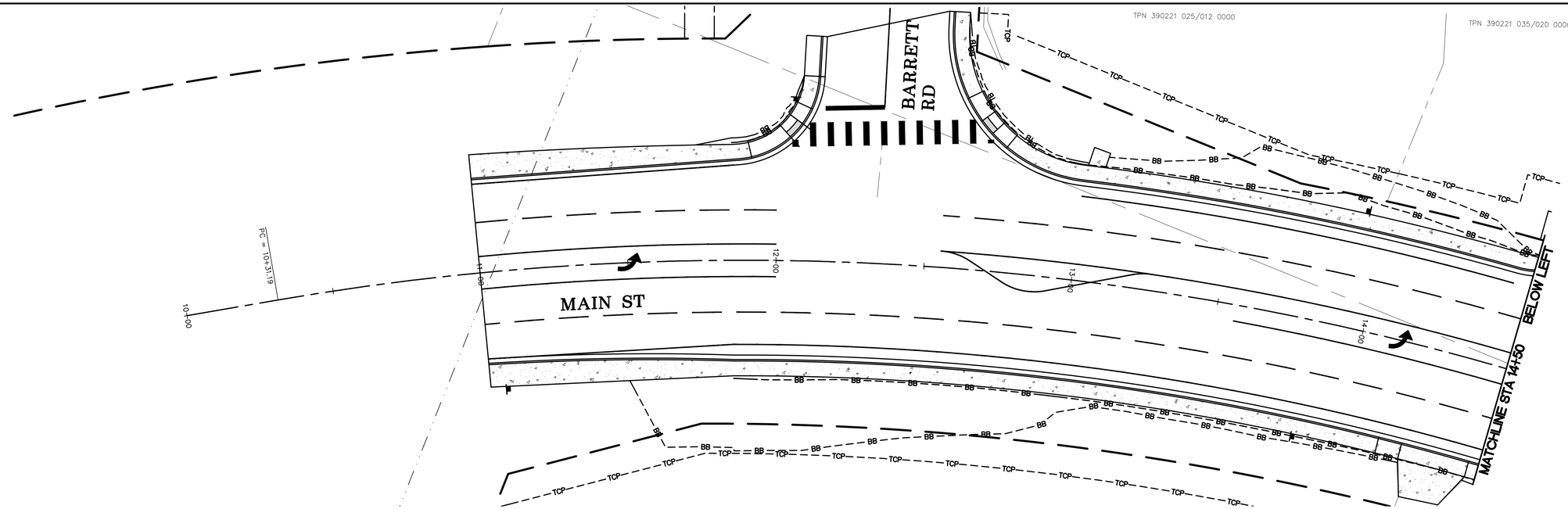

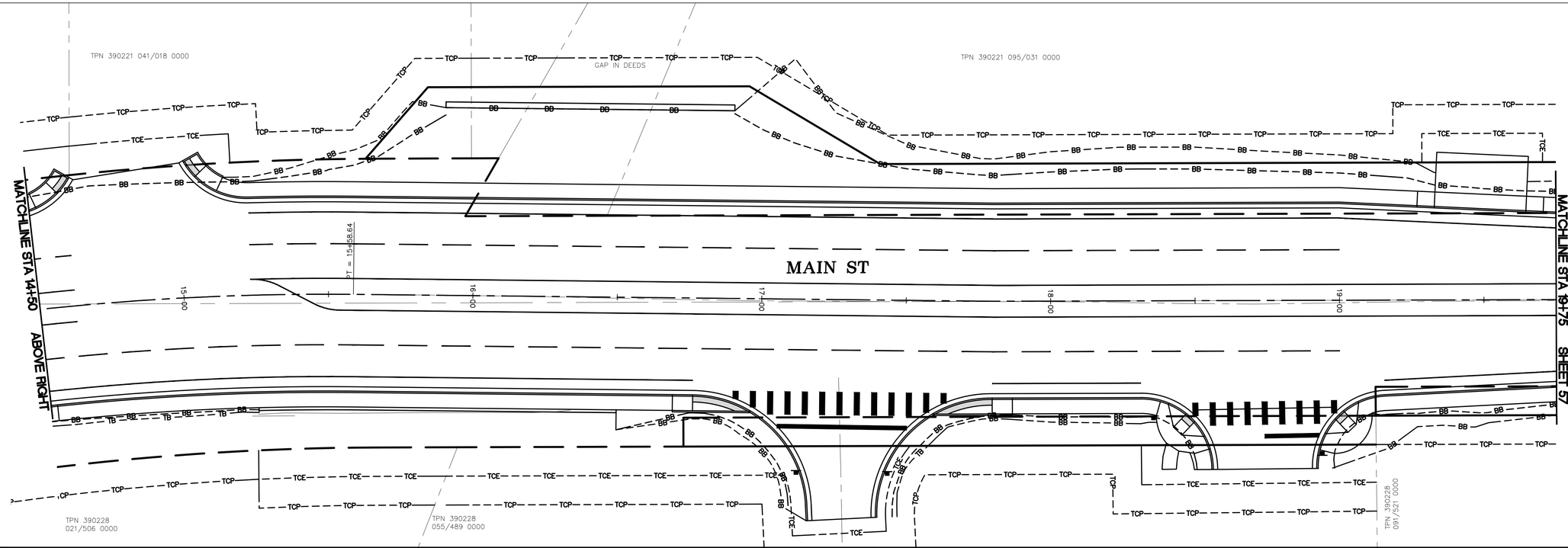

60% PLANS

DESIGNED BY	DRAWN BY	CHECKED BY
TRB	RGS	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
CHANNELIZATION AND RESTORATION PLAN - STA 10+00 TO 19+75

DWG	DATE
22015 PLOT	3/29/24

JOB#	SCALE	SHEET
22015	H: 1"=20' V: N/A	56 of 64

TYLER ROSS EBBE STATE OF WASHINGTON 56224 REGISTERED PROFESSIONAL ENGINEER

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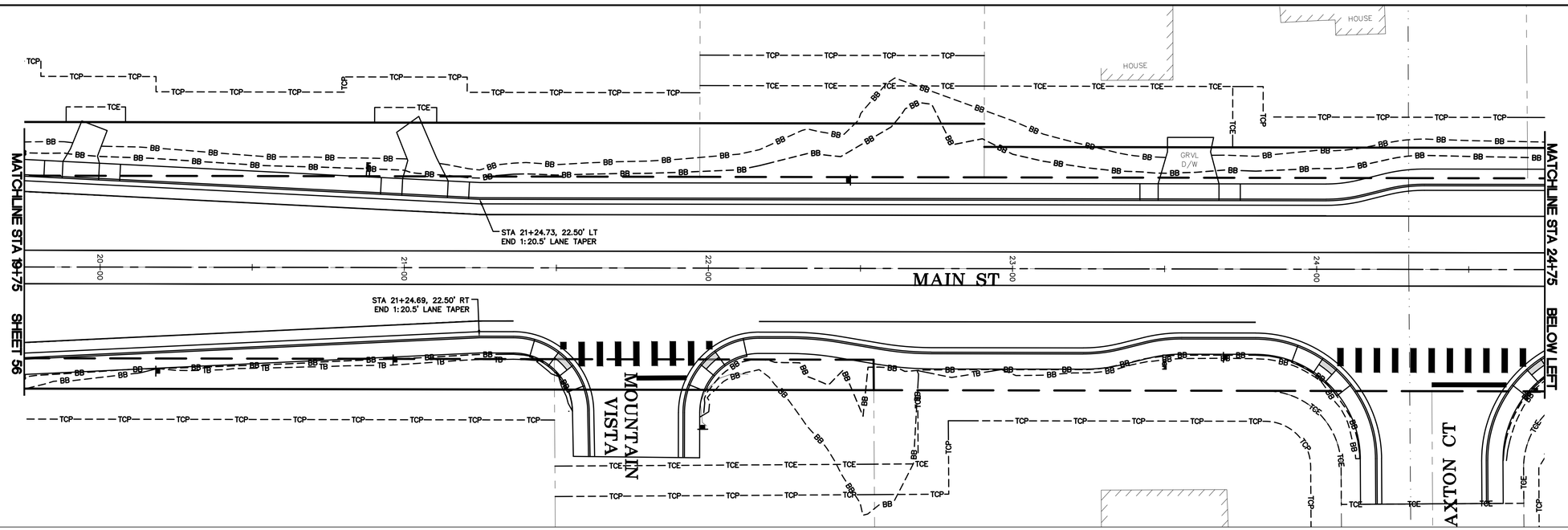

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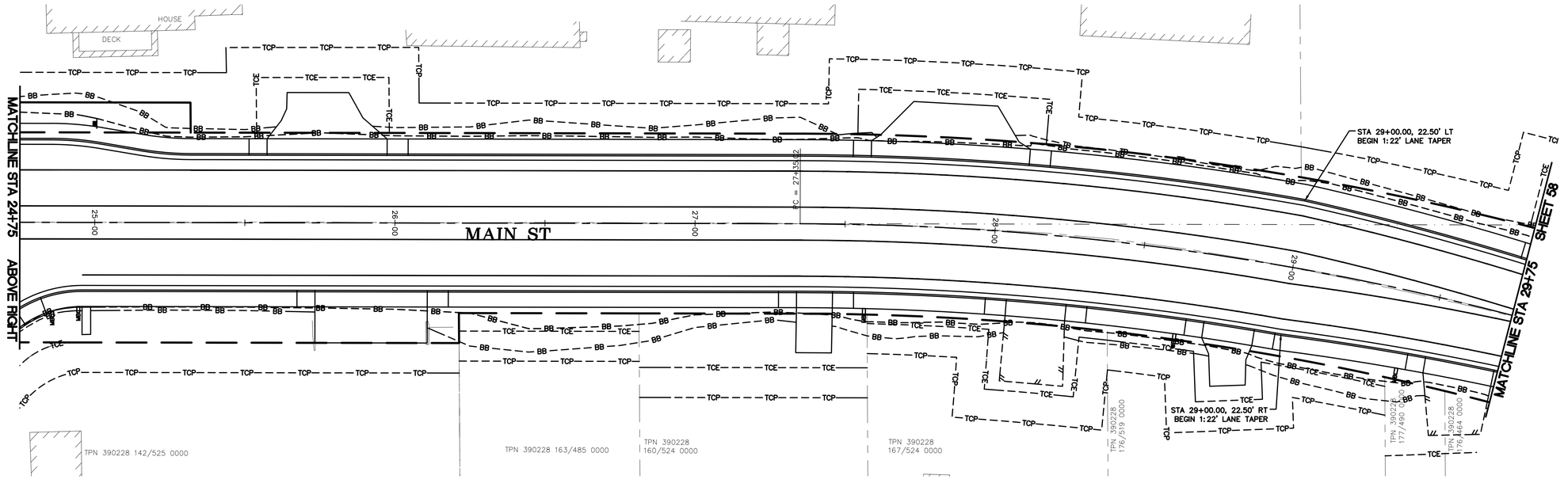

GRAPHIC SCALE

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(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

TILLER ROSS HEBB
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
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Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
CHANNELIZATION AND RESTORATION PLAN - STA 19+75 TO 29+75

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: N/A	SHEET 57 of 64

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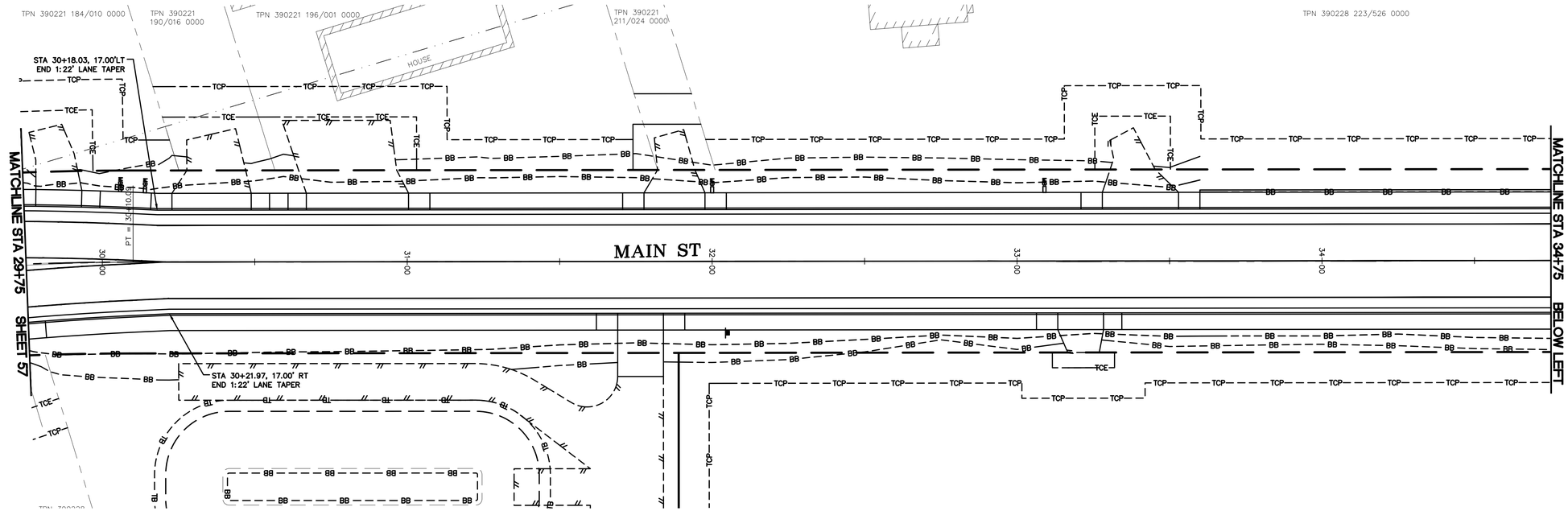

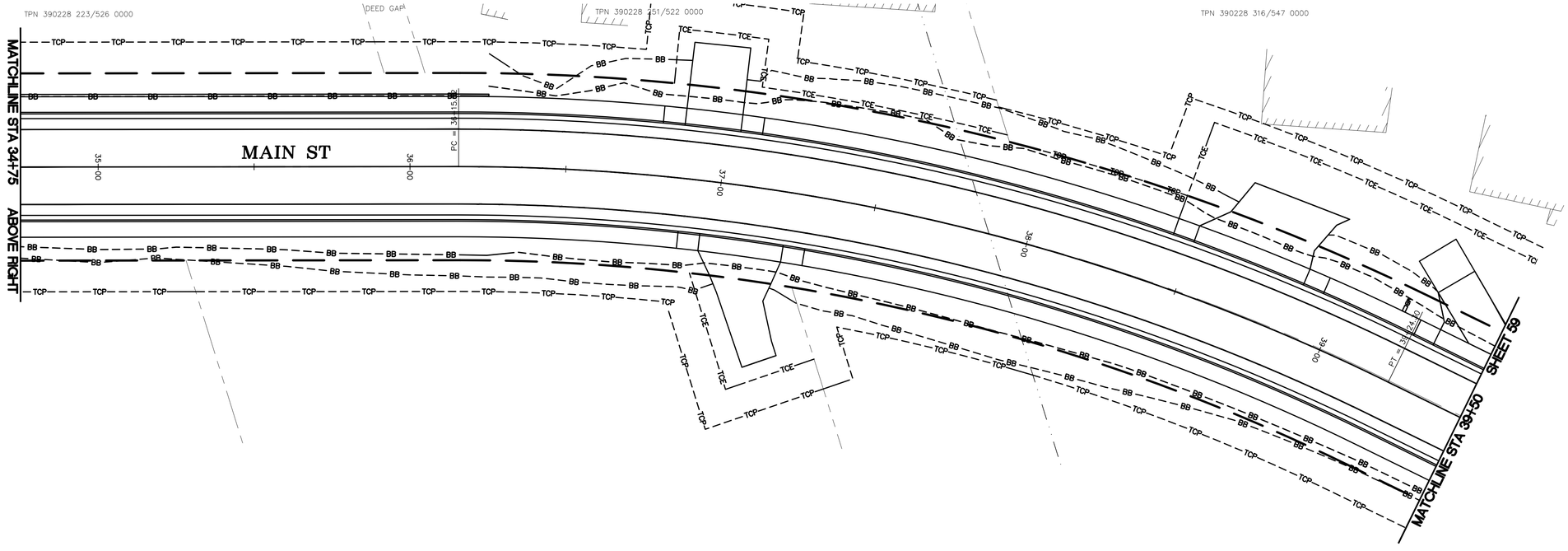

GRAPHIC SCALE

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(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

TYLER ROSS BIRKS
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

PRELIMINARY

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS

BARRETT ROAD TO OLD SETTLERS DRIVE

CHANNELIZATION AND RESTORATION PLAN - STA 29+75 TO 39+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20'	V: N/A	SHEET 58 of 64

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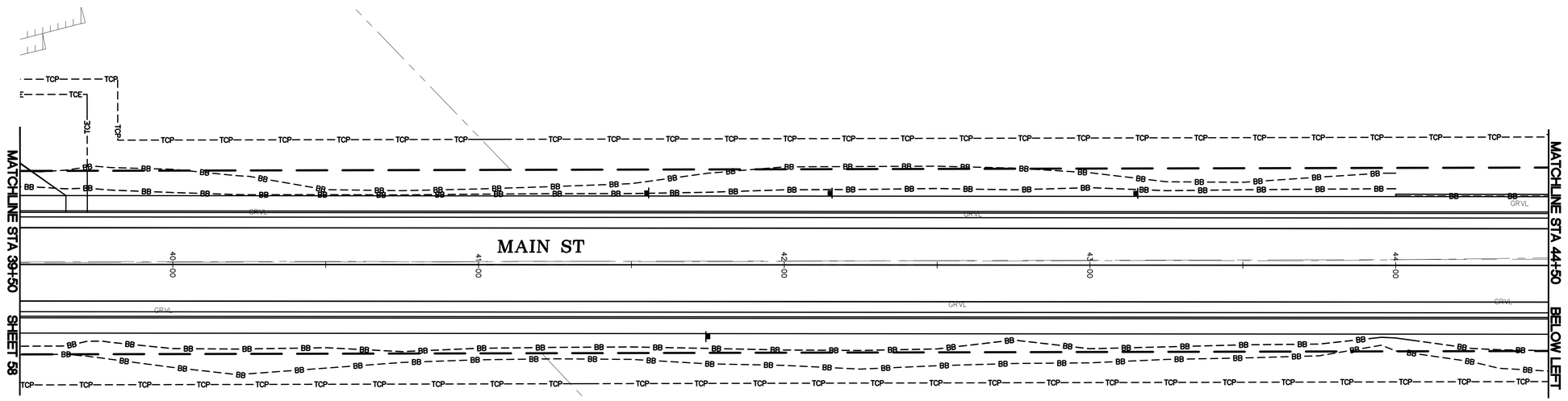

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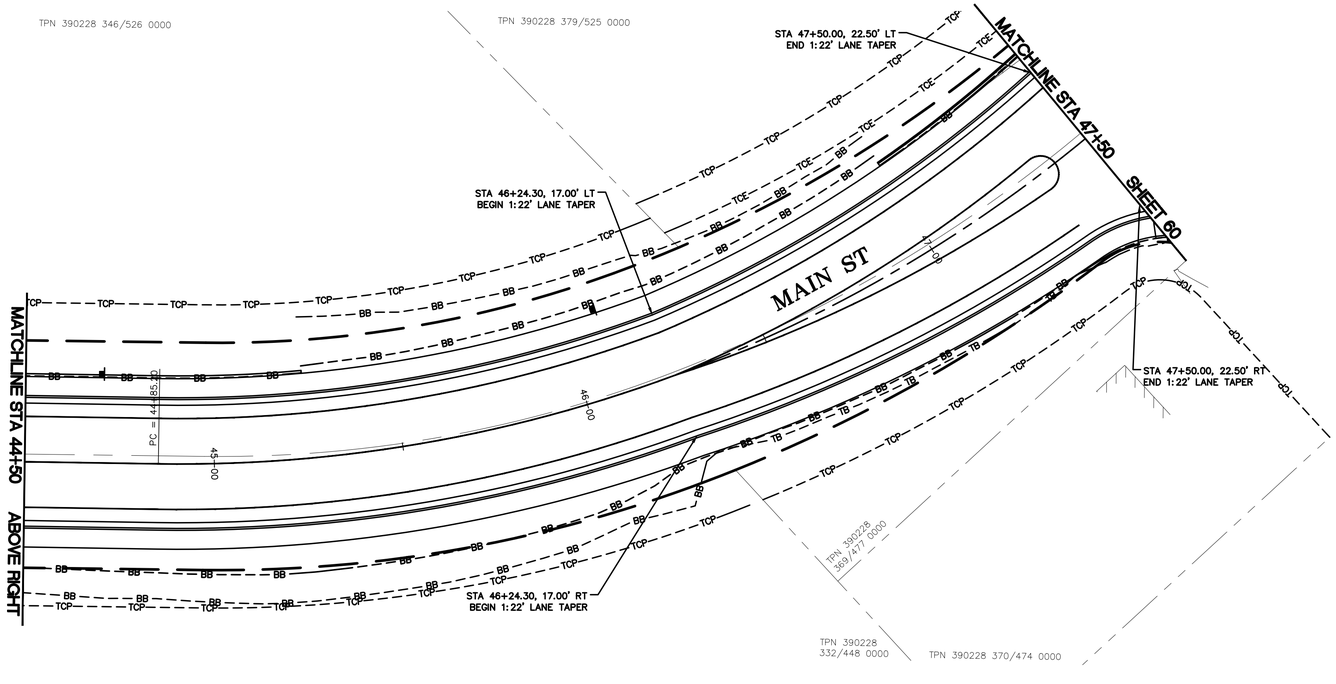

GRAPHIC SCALE

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(IN FEET)
1"=20' (22x34), 1"=40' (11x17)

TILLER ROSS EBBE
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	TRB
DRAWN BY	RGS
CHECKED BY	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
CHANNELIZATION AND RESTORATION PLAN - STA 39+50 TO 47+50

DWG 22015 PLOT			DATE 3/29/24
JOB# 22015	SCALE H: 1"=20' V: N/A		SHEET 59 of 64

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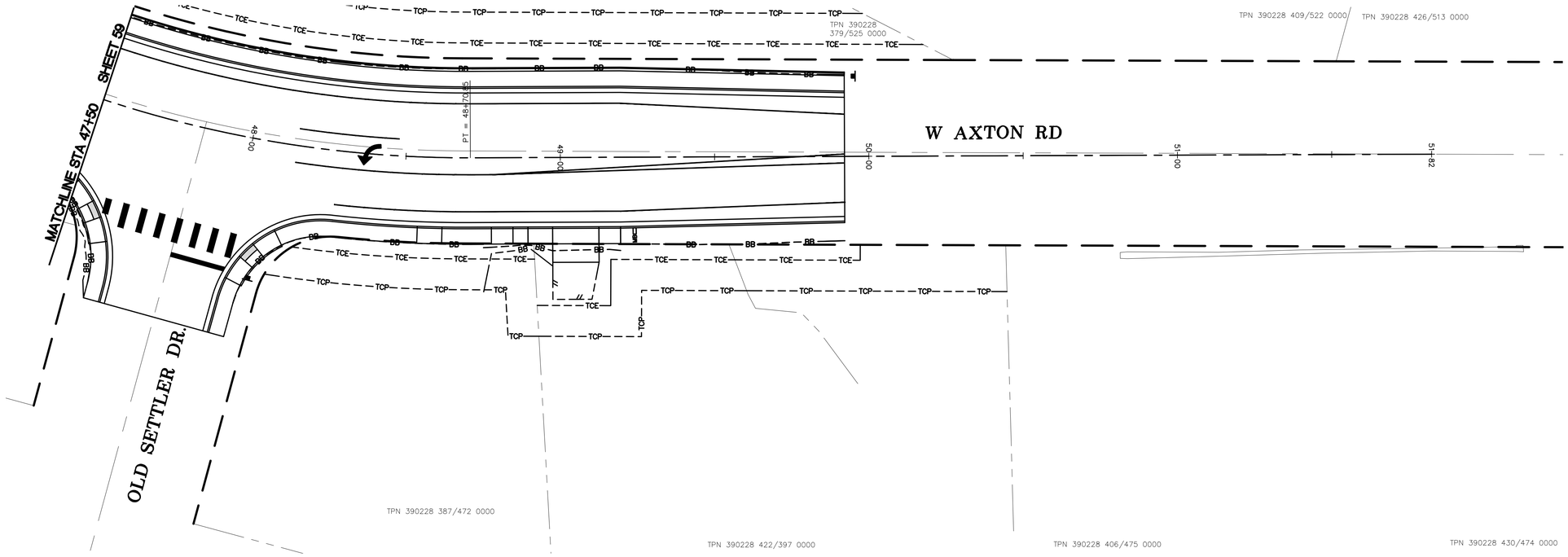

GRAPHIC SCALE

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(IN FEET)

1"=20' (22x34), 1"=40' (11x17)

TILLER ROSS EBBE
STATE OF WASHINGTON
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REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

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DRAWN BY RGS
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ENGINEERING INC
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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
CHANNELIZATION AND RESTORATION PLAN - STA 47+50 TO 52+00

DWG 22015 PLOT
DATE 3/29/24
JOB# 22015
SCALE H: 1"=20' V: N/A
SHEET 60 of 64

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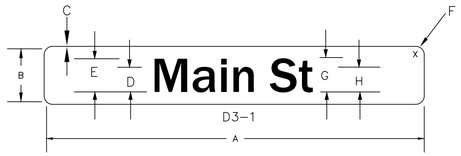


SIGNING DETAILS (TYP)

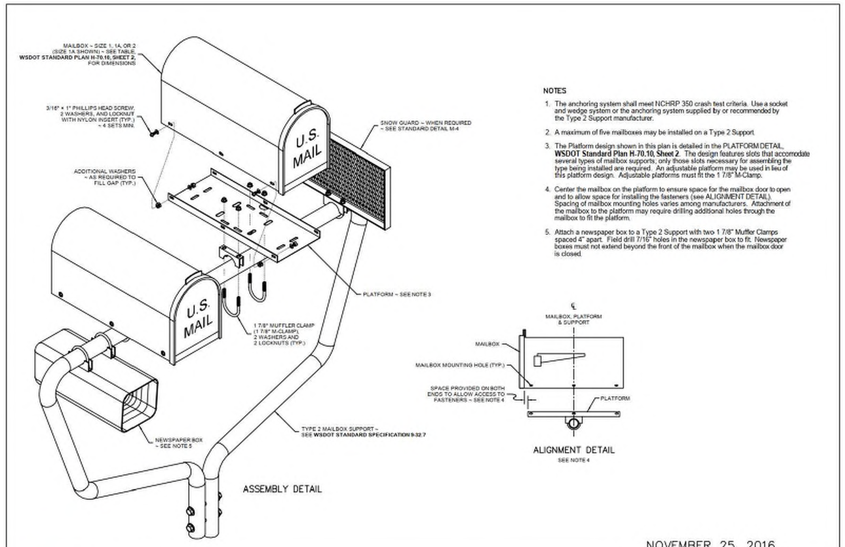
DIMENSIONS (INCHES)							
A	B	C	D	E	F	G	H
VA	6	5/8	3	4	1 1/2	3	2 1/4

COLORS

LETTERS – WHITE (REFL)
BACKGROUND – GREEN (REFL)

TYPICAL SIGN DETAIL

NTS



NOTES

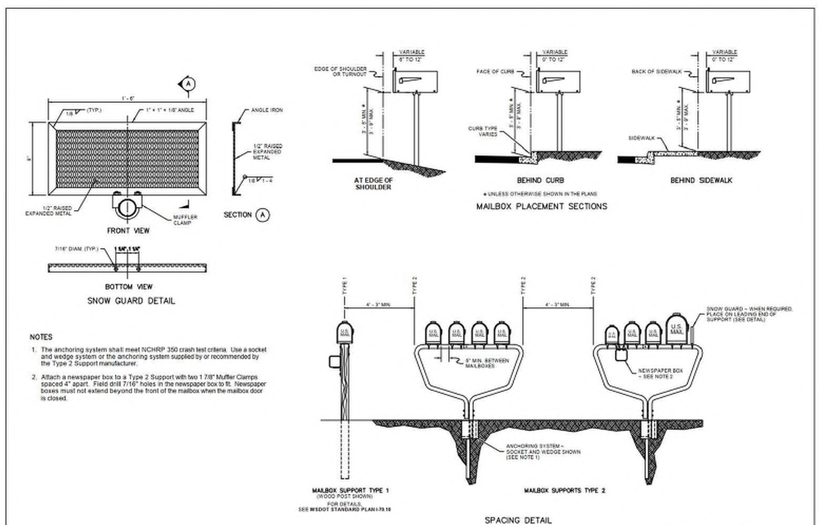
1. The anchoring system shall meet NCHRP 350 crash test criteria. Use a socket and wedge system or the anchoring system supplied by or recommended by the Type 2 Support manufacturer.
2. A maximum of five mailboxes may be installed on a Type 2 Support.
3. The Platform design shown in this plan is detailed in the PLATFORM DETAIL, **WSDOT Standard Plan H.70.10, Sheet 2**. The design features slots that accomodate several types of mailbox supports; only those slots necessary for assembling the type being installed are required. An adjustable platform may be used in lieu of this platform design. Adjustable platforms must fit the 1 7/8" M-Clamp.
4. Center the mailbox on the platform to ensure space for the mailbox door to open and to allow space for installing the fasteners (see ALIGNMENT DETAIL). Spacing of mailbox mounting holes varies among manufacturers. Attachment of the mailbox to the platform may require drilling additional holes through the mailbox to fit the platform.
5. Attach a newspaper box to a Type 2 Support with two 1 7/8" Muffler Clamps spaced 4" apart. Field drill 7/16" holes in the newspaper box to fit. Newspaper boxes must not extend beyond the front of the mailbox when the mailbox door is closed.

NOVEMBER 25, 2016

APPROVED

Public Works Director — 8/11/17 Date

MAILBOX SUPPORT TYPE 2
STANDARD DETAIL M-3
NOT TO SCALE



NOTES

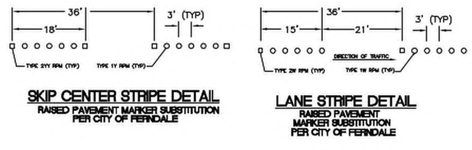
1. The anchoring system shall meet NCHRP 350 crash test criteria. Use a socket and wedge system or the anchoring system supplied by or recommended by the Type 2 Support manufacturer.
2. Attach a newspaper box to a Type 2 Support with two 1 7/8" Muffler Clamps spaced 4" apart. Field drill 7/16" holes in the newspaper box to fit. Newspaper boxes must not extend beyond the front of the mailbox when the mailbox door is closed.

NOVEMBER 25, 2016

APPROVED

Public Works Director — 8/11/17 Date

MAILBOX SUPPORT TYPE 2 INSTALLATION
STANDARD DETAIL M-4
NOT TO SCALE



NOVEMBER 25, 2016

APPROVED

Public Works Director — 8/11/17 Date

STRIPING
STANDARD DETAIL R-20
NOT TO SCALE

60% PLANS

DESIGNED BY TRB
DRAWN BY RGS
CHECKED BY TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

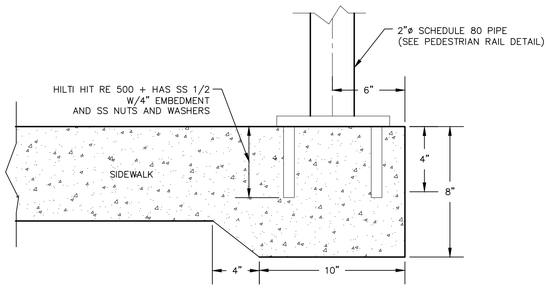
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

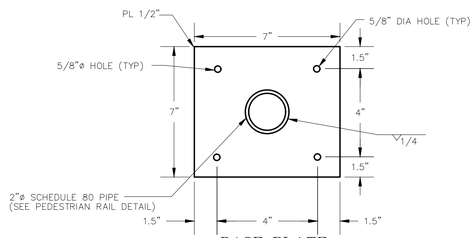
MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
CHANNELIZATION AND MISC. DETAILS 1

DWG 22015 DETAILS
JOB# 22015
SCALE H: N/A V: N/A
DATE 3/29/24
SHEET 61 of 64

P:\Projects\2015\Civil 3D 2021\2015 DETAILS.dwg, 61 CHANNELIZATION AND MISC. DETAILS 1, 3/29/2024 3:52:00 PM, , AutoCAD PDF (General Documentation).pc3



ELEV VIEW

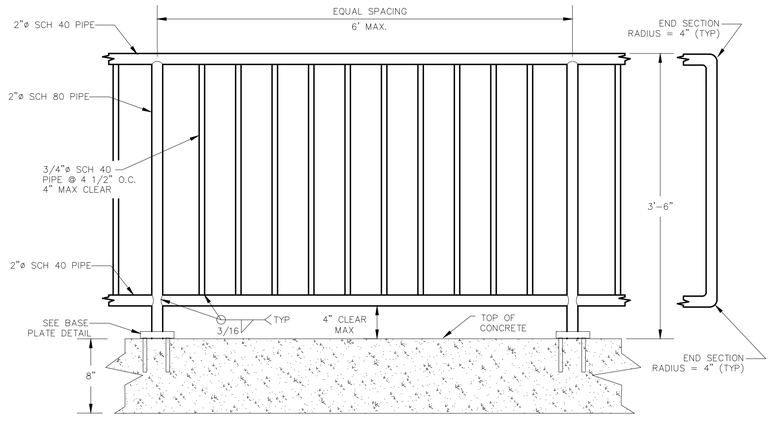


BASE PLATE

NTS

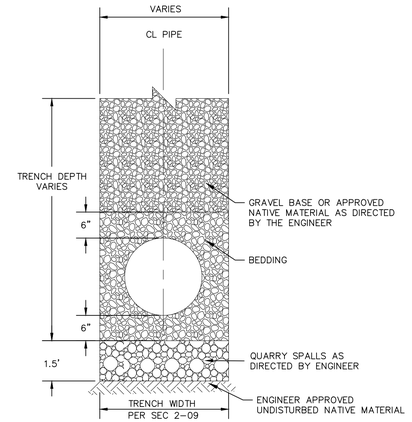
NOTES:

1. HANDRAIL SHALL BE HOT DIPPED GALVANIZED.
2. COLD GALVANIZED COMPOUND SHALL BE APPLIED TO ALL FIELD WELDS AND BLEMISHES.
3. PIPES SHALL BE ASTM A53 GRADE B.



PEDESTRIAN RAIL DETAIL

NTS



UNSUITABLE SOILS TRENCH DETAIL

NTS

TILLER ROSS EBBE
STATE OF WASHINGTON
56224
REGISTERED
PROFESSIONAL ENGINEER

60% PLANS

DESIGNED BY	DRAWN BY	CHECKED BY
TRB	RGS	TRB

Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
MISC. DETAILS

DWG 22015 DETAILS
DATE 3/29/24
JOB# 22015
SCALE H: N/A V: N/A
SHEET 62 of 64

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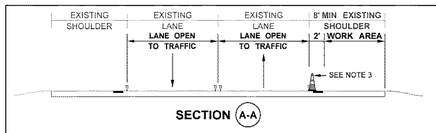


SECTION (A-A)

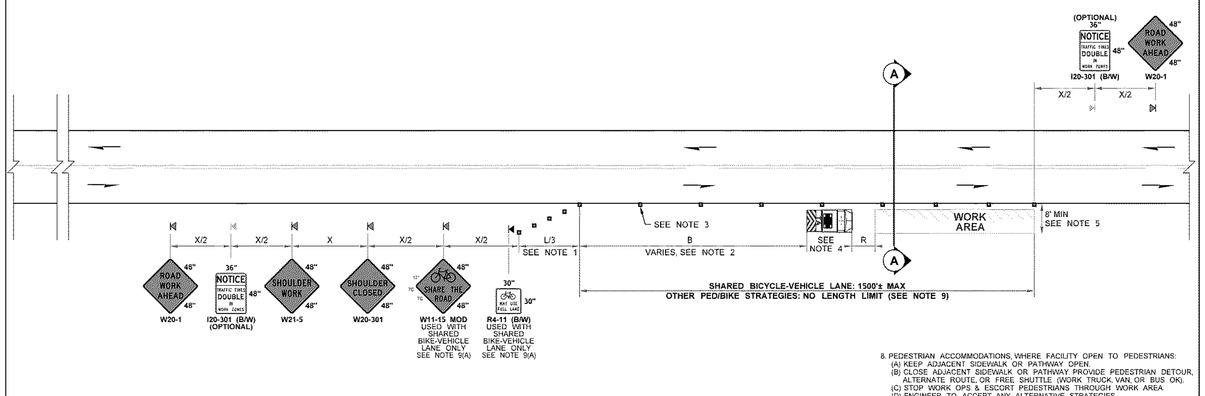
RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800'±
RURAL ROADS	45-55 MPH	500'±
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 8'	L/3 (feet)	USE LANE CLOSURE INSTEAD				
8'		120	160	160	160	200
10'		150	200	200	200	240

LONGITUDINAL BUFFER SPACE = B					
SPEED (MPH)	45	50	55	60	65
B (feet)	360	425	495	570	645
Buffer space may be adjusted (±) based on field conditions.					

MAXIMUM CHANNELIZING DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	50

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R			
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.		HOST VEHICLE WEIGHT 22,000+ lbs.	
45-55 MPH	60+ MPH	45-55 MPH	60+ MPH
123'	172'	100'	150'



LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- CHANNELIZING DEVICE (SEE NOTE 3)
- TRANSPORTABLE ATTENUATOR

NOTES:

1. IF FEASIBLE AVOID PLACING SHOULDER CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
3. 28" TRAFFIC CONE, 36" TRAFFIC CONES, 42" TALL CHANNELIZING DEVICES, OR TRAFFIC SAFETY DRUMS ALLOWED ON TAPERS AND TANGENTS. ENCROACHMENT INTO ADJACENT OPEN LANE PROHIBITED (BASE WEIGHT MAY ENCROACH).
4. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
5. IF PAVED SHOULDER IS LESS THAN 3 FEET WIDE AT TRANSPORTABLE ATTENUATORS AND WORK AREA, THEN A LANE CLOSURE SHALL BE IMPLEMENTED.
6. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
7. PLAN IS APPLICABLE TO SHOULDER CLOSURES OF 7 DAYS OR LESS.
8. PEDESTRIAN ACCOMMODATIONS WHERE FACILITY OPEN TO PEDESTRIANS:
   (A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
   (B) CLOSE ADJACENT SIDEWALK OR PATHWAY PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
   (C) STOP WORK OPS & ESCORT PEDESTRIANS THROUGH WORK AREA.
   (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
9. BICYCLIST ACCOMMODATIONS WHERE FACILITY OPEN TO BICYCLES:
   (A) SHARED BICYCLE-VEHICLE LANE ADD WI1-15 MOD & R4-11 SIGNS.
   (B) BICYCLES PROHIBITED VIA R5-601 (IF EXIT-RAMP PRESENT) & R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
   (C) BICYCLES PROHIBITED VIA R5-6 SIGN(S). PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION/PHONE BOX/LABORER.
   (D) STOP WORK OPS & ESCORT BICYCLISTS THROUGH SHOULDER CLOSURE.
   (E) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

SHOULDER CLOSURE (45+ MPH HIGHWAYS)

NOT TO SCALE

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DATE	1/26/2024			10	WASH		
PLOTTED BY	LintzF			JOB NUMBER			SHEET 1 OF 1 SHEETS
DESIGNED BY				CONTRACT NO.		LOCATION NO.	
ENTERED BY							
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.	REVISION	DATE	BY	P.E. STAMP BOX	DATE	P.E. STAMP BOX	DATE

Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

TYLER ROSS EIMES — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER — RELEASED

60% PLANS

DESIGNED BY	DRAWN BY	CHECKED BY
TRB	RGS	TRB

R&E Reichhardt & Ebe ENGINEERING INC
P.O. Box 978 | 423 Front Street
Lynden, WA 98264 (360) 354-3687

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
BARRETT ROAD TO OLD SETTLERS DRIVE
TRAFFIC CONTROL DETAILS 1

DWG 22015 DETAILS
JOB# 22015
SCALE H: N/A V: N/A
DATE 3/29/24
SHEET 63 of 64

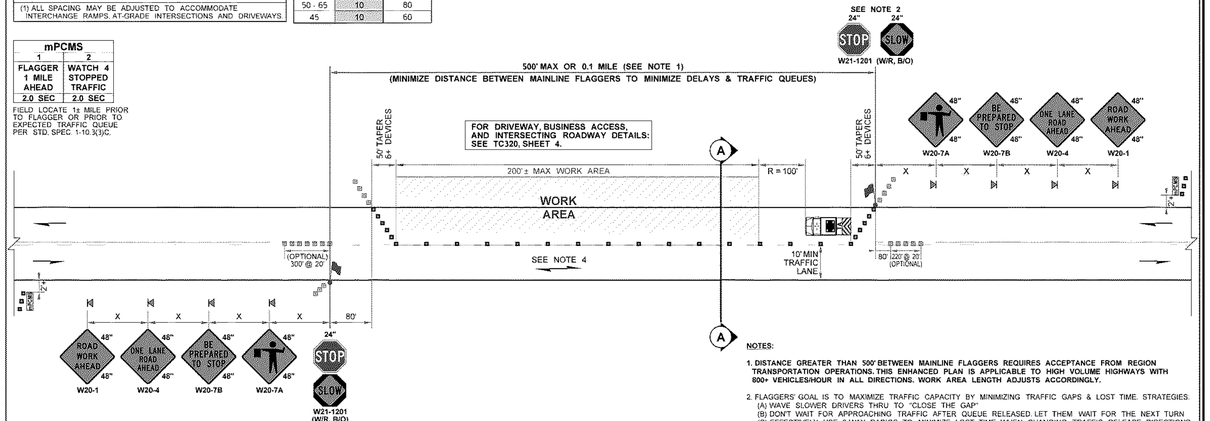
P:\Projects\22015\Civil 3D 2021\22015 DETAILS.dwg, 63 TRAFFIC CONTROL DETAILS 1, 3/29/2024 3:52:09 PM, , AutoCAD PDF (General Documentation).pc3

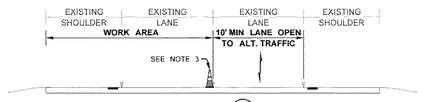
RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800' ±
RURAL ROADS	45-55 MPH	500' ±
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	10	80
45	10	60

mPCMS	
1	2
FLAGGER 1 MILE AHEAD	WATCH 4 STOPPED TRAFFIC
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO FLAGGER OR PRIOR TO EXPECTED TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.





SECTION (A-A)

LEGEND:

- TEMPORARY SIGN LOCATION
- 28" REFLECTIVE TRAFFIC CONE (SEE NOTE 3)
- OPTIONAL CHANNELIZATION DEVICE
- TRANSPORTABLE ATTENUATOR (TL-3)
- FLAGGER
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 8)

NOTES:

1. DISTANCE GREATER THAN 500' BETWEEN MAINLINE FLAGGERS REQUIRES ACCEPTANCE FROM REGION TRANSPORTATION OPERATIONS. THIS ENHANCED PLAN IS APPLICABLE TO HIGH VOLUME HIGHWAYS WITH 800+ VEHICLES/HOUR IN ALL DIRECTIONS. WORK AREA LENGTH ADJUSTS ACCORDINGLY.
2. FLAGGERS' GOAL IS TO MAXIMIZE TRAFFIC CAPACITY BY MINIMIZING TRAFFIC GAPS & LOST TIME. STRATEGIES:
   (A) WAVE SLOWER DRIVERS THRU TO "CLOSE THE GAP"
   (B) DON'T WAIT FOR APPROACHING TRAFFIC AFTER QUEUE RELEASED. LET THEM WAIT FOR THE NEXT TURN
   (C) EFFECTIVELY USE 2-WAY RADIOS TO MINIMIZE LOST TIME WHEN CHANGING TRAFFIC RELEASE DIRECTIONS
3. MAY SHIFT LATERALLY. 36" TRAFFIC CONES, 42" TALL CHANNELIZATION DEVICES, OR TRAFFIC SAFETY DRUMS OK.
4. PEDESTRIAN & BICYCLIST ACCOMMODATIONS (ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES):
   (A) ALLOW PEDESTRIANS TO USE THE PAVED SHOULDER OR ADJACENT PATH OPPOSITE THE WORK AREA
   (B) COMBINE BIKES & VEHICULAR TRAFFIC BIKES TO CLEAR PRIOR TO RELEASING ONCOMING TRAFFIC
   (C) PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS MAY BE USED)
5. SEE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS:
   1-07.8(1) HIGH-VISIBILITY APPAREL
   1-10.3(1)A FLAGGERS AND NIGHTTIME ILLUMINATION
   1-10.3(2)A TRAFFIC CONTROL PROCEDURES
   9-35.1 24-INCH STOP/SLOW PADDLE SIZE
6. FOR PROJECT-SPECIFIC REQUIREMENTS, SEE SPECIAL PROVISIONS.
7. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
8. FULL-SIZE PCMS (11'x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMSs. PCMS MESSAGES MAY BE MODIFIED.
9. EXISTING PAVEMENT MARKINGS MAY VARY.

ALTERNATING 1-LANE, 2-WAY TRAFFIC: FLAGGER-CONTROLLED (HIGH VOLUME 45+ MPH HIGHWAYS)

NOT TO SCALE

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DATE	7/18/2023			10	WASH		
PLOTTED BY	LintzF			JOB NUMBER			SHEET 3 OF 4 SHEETS
DESIGNED BY							
ENTERED BY				CONTRACT NO.		LOCATION NO.	
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

Washington State Department of Transportation

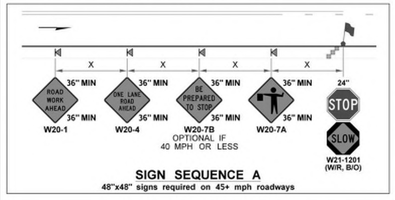
P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

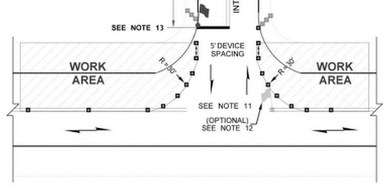
TYPICAL TRAFFIC CONTROL PLANS

NOTES:

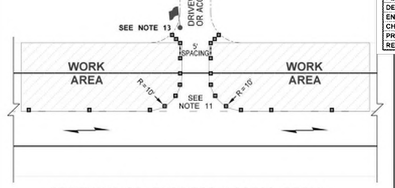
10. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC320, SHEET 3.
11. WORK MAY BRIEFLY OCCUR WITHIN LANE CLOSURE ACROSS INTERSECTING BUSINESS ACCESSES AND DRIVEWAYS ONLY. **MAY HOLD ACCESS TRAFFIC FOR LESS THAN 1 MINUTE** WHILE RESTRICTING TURNS FROM MAINLINE CHANNELIZATION DEVICES DELINEATING APPROACH OR ACCESS MAY BE REMOVED OR RELOCATED AS NEEDED.
12. SINGLE FLAGGER (WITH RED FLAG/RED GLOW CONE FLASHLIGHT) MAY BE ADDED TO THE INTERSECTING ROADWAY APPROACH TO HELP GUIDE ALTERNATING & TURNING TRAFFIC.
13. **FLAGGERS MAY COLLABORATE TO RELEASE APPROACHIACCESS AND MAINLINE TRAFFIC TRAVELING IN THE SAME DIRECTION CONCURRENTLY.**



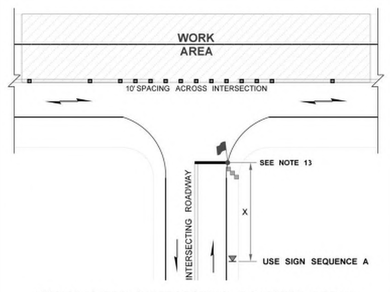
SIGN SEQUENCE A
48"x48" signs required on 45+ mph roadways



UNSIGNALIZED INTERSECTING ROADWAY DETAIL
SAME SIDE AS LANE CLOSURE (TWO OPEN LANES)



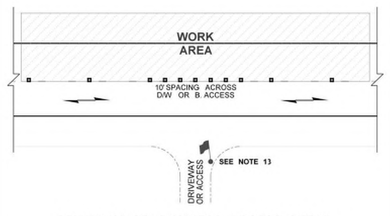
DRIVEWAY OR BUSINESS ACCESS DETAIL
SAME SIDE AS LANE CLOSURE



UNSIGNALIZED INTERSECTING ROADWAY DETAIL
OPPOSITE OF LANE CLOSURE

DETAIL NOT USED
FOR HIGH VOLUME CONFIGURATIONS

UNSIGNALIZED INTERSECTING ROADWAY DETAIL
SAME SIDE AS LANE CLOSURE (SINGLE OPEN LANE)



DRIVEWAY OR BUSINESS ACCESS DETAIL
OPPOSITE OF LANE CLOSURE

ALTERNATING 1-LANE, 2-WAY TRAFFIC: FLAGGER-CONTROLLED (HIGH VOLUME 45+ MPH HIGHWAYS)

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DATE	7/18/2023			10	WASH		
PLOTTED BY	LintzF			JOB NUMBER			SHEET 4 OF 4 SHEETS
DESIGNED BY							
ENTERED BY				CONTRACT NO.		LOCATION NO.	
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

Washington State Department of Transportation

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TYPICAL TRAFFIC CONTROL PLANS

TYLER ROSS EBBE — STATE OF WASHINGTON — 56224 — REGISTERED PROFESSIONAL ENGINEER

60% PLANS

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NO.	DATE	DESCRIPTION	BY

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2095 MAIN ST
FERNDALE, WA 98248

MAIN STREET IMPROVEMENTS
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TRAFFIC CONTROL DETAILS 2

DWG 22015 DETAILS
JOB# 22015
SCALE H: N/A V: N/A
DATE 3/29/24
SHEET 64 of 64

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