

# City of Owosso

## 2020 Retaining Wall Project

Shiawassee County, Michigan

### VICINITY MAP



### UTILITY INFORMATION

THE EXISTING UTILITIES SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN LOCATED FROM UTILITY RECORD DRAWINGS. ACTUAL UTILITY LOCATIONS MAY VARY FROM WHAT IS SHOWN. ALL UTILITIES TO BE FIELD VERIFIED BY UTILITY OWNER PRIOR TO CONSTRUCTION.

**CABLE TV:**  
CHARTER COMMUNICATIONS  
ATTN: MARK KELLY  
1480 S. VALLEY CENTER DRIVE  
BAY CITY, MI 48706  
PHONE: (989) 233-9404  
EMAIL: MARK.KELLY@CHARTERCOM.COM

**TELEPHONE:**  
FRONTIER COMMUNICATIONS CORP.  
ATTN: MARK STEVENS  
1943 W. M-21  
OWOSSO, MI 48867  
PHONE: (989) 723-0373  
EMAIL: MARK.STEVENS@FTR.COM

**INTERNET:**  
DAYSTARR COMMUNICATIONS  
ATTN: BRENT KLEIN  
307 N. BALL STREET  
OWOSSO, MI 48867  
PHONE: (989) 720-6060  
EMAIL: BRENT.KLEIN@DAYSTARRFIBER.NET

**SANITARY SEWER AND WATER:**  
CITY OF OWOSSO  
ATTN: GLENN CHINAVARE  
301 W. MAIN ST. - CITY HALL  
OWOSSO, MI 48867  
PHONE: (989) 725-0550  
EMAIL: GLENN.CHINAVARE@CI.OWOSSO.MI.US

**WALKWAY AND LIGHTS:**  
CITY OF OWOSSO  
ATTN: CLAYTON WEHNER  
301 W. MAIN ST. - CITY HALL  
OWOSSO, MI 48867  
PHONE: (989) 725-0551  
EMAIL: CLAYTON.WEHLNER@CI.OWOSSO.MI.US

**ELECTRIC:**  
CONSUMERS ENERGY  
ATTN: TRACY MAHAR  
1801 W. MAIN STREET  
OWOSSO, MI 48867  
PHONE: (989) 729-3250  
EMAIL: TMMAHAR@CMSENERGY.COM

**GAS:**  
CONSUMERS ENERGY  
ATTN: ADAM BERTRAM  
530 W. WILLOW ST.  
LANSING, MI 48906  
PHONE: (517) 374-2375  
EMAIL: ADAM.BERTRAM@CMSENERGY.COM

**SOIL EROSION AND SEDIMENTATION CONTROL:**  
SHIAWASSEE COUNTY HEALTH DEPARTMENT  
ATTN: STEVE ALWORDEN  
201 N. SHIAWASSEE STREET  
CORUNNA, MI 48817  
PHONE: (989) 743-2289  
EMAIL: SALWORDEN@SHIAWASSEECHD.NET

CITY OF OWOSSO, MICHIGAN  
ENGINEERING DIVISION  
DEPT. OF PUBLIC SERVICE

NO.	REVISIONS	DATE	BY
1	IFB	2/10/20	CW

NO.	REVISIONS	DATE	BY

BENCHMARK DATA	DESCRIPTION
ELEV.	

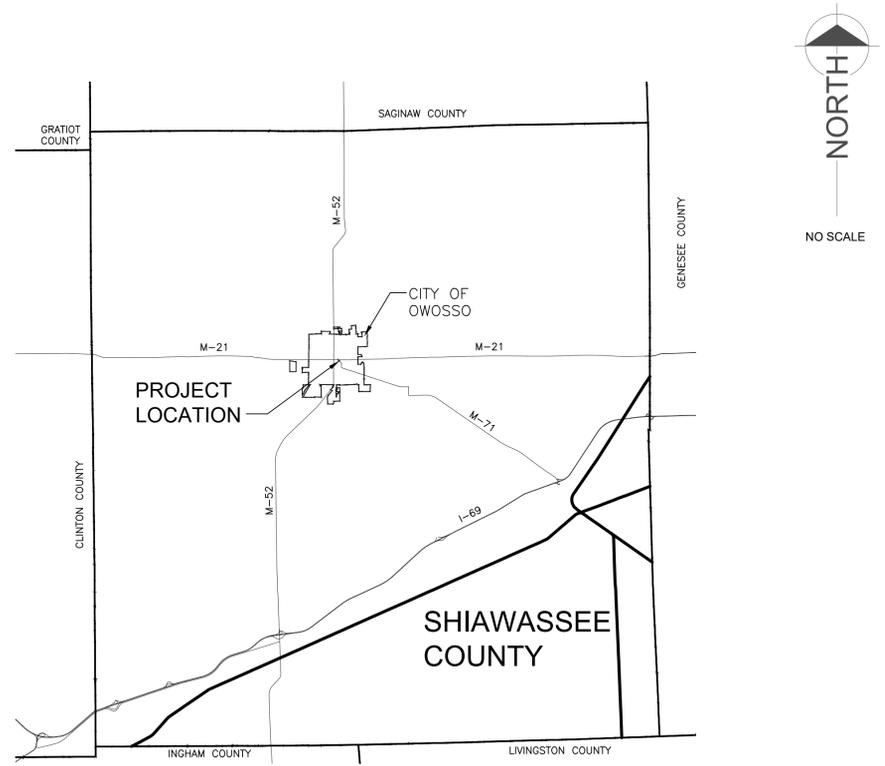
2020 RETAINING WALL PROJECT	FIELD BOOK
OWOSSO CITY HALL	PG.
COVER SHEET	
DATE	
PROJECT NO.	

CS

### SHEET LIST

- C-1 EXISTING CONDITIONS
- C-2 SOIL EROSION & SEDIMENTATION CONTROL PLAN & DETAILS
- C-3 REMOVAL PLAN
- C-4 UTILITY/GRADING/LAYOUT PLAN
- D-1 DETAIL SHEET
- D-2 DETAIL SHEET

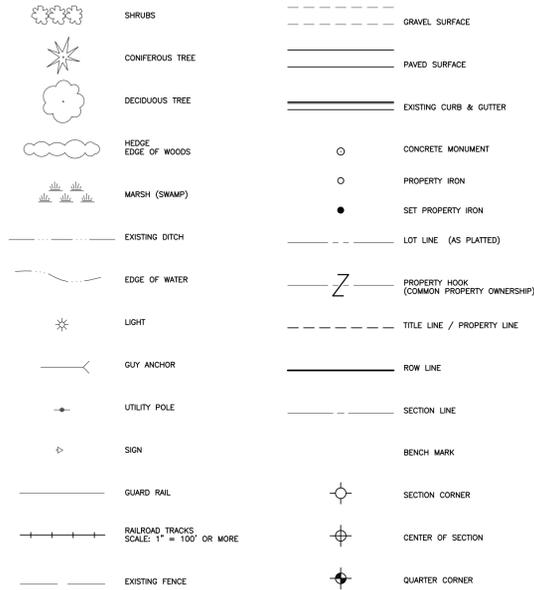
### LOCATION MAP



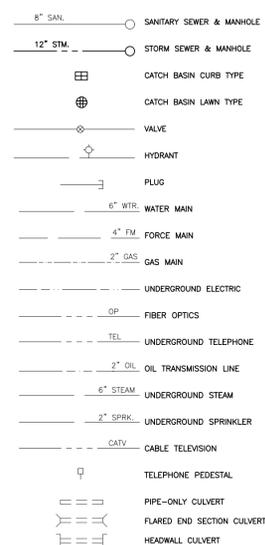
**GENERAL NOTES**

- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL CODES, RULES AND REGULATIONS. OBTAIN ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS AND PAY PERMIT FEES FOR THE WORK OR CONFIRM REQUIRED PERMITS HAVE BEEN OBTAINED BY OTHERS PRIOR TO COMMENCING CONSTRUCTION.
- BE RESPONSIBLE AT ALL TIMES FOR SITE SAFETY IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY HAVING JURISDICTION.
- CALL MISS DIG @ 1-800-482-7171 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO CONFIRM THE LOCATIONS OF EXISTING BURIED UTILITIES. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM. COORDINATE THE RELOCATION OF EXISTING UTILITIES WITH THE UTILITY OWNER. BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND REPAIRING DAMAGE TO EXISTING UTILITIES RESULTING FROM THE WORK. BE RESPONSIBLE FOR THE COSTS OF REPAIRING OR REPLACING ANY DAMAGED UTILITIES AT NO EXPENSE TO THE OWNER.
- COMPLY WITH THE CONDITIONS AND REQUIREMENTS OF THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT, INCLUDING BUT NOT LIMITED TO, CERTIFIED STORMWATER OPERATOR REQUIREMENTS. INSTALL ALL CONTROL MEASURES PRIOR TO COMMENCING CONSTRUCTION.
- PROVIDE TRAFFIC CONTROL BARRICADES, SIGNS, LIGHTS, ETC. IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AS NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC. MAINTAIN THESE DEVICES AT ALL TIMES DURING CONSTRUCTION.
- MAINTAIN A CLEAN WORK AREA. THOROUGHLY CLEAN AND/OR SWEEP STREETS AND ROADWAYS AS REQUIRED BY THE GOVERNING AUTHORITY.
- MAINTAIN ACCESS TO EXISTING DRIVEWAYS AND MAIL BOXES DURING CONSTRUCTION. COORDINATE WITH THE AUTHORITIES HAVING JURISDICTION. CONDUCT OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. ANY CLOSURE REQUIRES PERMISSION FROM THE AUTHORITIES HAVING JURISDICTION.
- RESTORE ALL DISTURBED AREAS NOT COVERED BY OTHER SURFACE TREATMENT WITH CITY APPROVED SOD.
- PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE. RESTORE/REPLACE DAMAGED IMPROVEMENTS TO ORIGINAL CONDITION ACCEPTABLE TO PARTIES HAVING JURISDICTION.
- KEEP THE APPROVED SET OF PROJECT DRAWINGS ON SITE AT ALL TIMES. REDLINE THE ACTUAL LOCATIONS AND DIMENSION (VERTICAL AND HORIZONTAL) OF CONSTRUCTED OR EXISTING ITEMS WHICH DIFFER FROM OR ARE NOT SHOWN ON THE ORIGINAL DRAWINGS. SUBMIT THESE RECORD DRAWINGS TO THE ENGINEER AT THE COMPLETION OF THE WORK.
- PROTECT TREES TO REMAIN FROM DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- HIRE A LICENSED LAND SURVEYOR TO WITNESS AND REPLACE ALL PROPERTY IRONS/SURVEY MONUMENTS WHICH WILL BE ALTERED IN ANY WAY DURING CONSTRUCTION.
- DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS. REFER DISCREPANCIES TO THE ENGINEER FOR CLARIFICATION.
- THE INFORMATION CONTAINED ON THESE DRAWINGS PERTAINING TO EXISTING CONDITIONS, SUCH AS BUT NOT LIMITED TO, UTILITIES, TOPOGRAPHY, SUBSURFACE CONDITIONS, IS FURNISHED SOLELY AS THE BEST INFORMATION AVAILABLE AND ITS ACCURACY IS NOT GUARANTEED. THE USE OF THIS INFORMATION DOES NOT PROVIDE RELIEF FOR ANY RESPONSIBILITY FOR DAMAGES DUE TO ANY INACCURACIES.
- ALL REMOVED MATERIALS ARE THE PROPERTY OF THE CONTRACTOR. CLEANUP AND DISPOSE OF ALL EXCESS MATERIALS OFF SITE AT A LOCATION DESIGNATED FOR THIS USE AND IN ACCORDANCE WITH LOCAL REGULATIONS OR AT AN ON SITE LOCATION DESIGNATED BY THE OWNER.
- USE (2) TWO BENCH MARKS FOR VERIFICATION OF ALL CONSTRUCTION ELEVATIONS. SET ADDITIONAL BENCH MARKS TO COMPLY WITH THIS REQUIREMENT.
- RESTORE ALL STREET SURFACES, DRIVEWAYS, CULVERTS, ROADSIDE DRAINAGE DITCHES, AND OTHER PUBLIC OR PRIVATE STRUCTURES THAT ARE DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS AND TO THE SATISFACTION OF THOSE HAVING JURISDICTION, UNLESS NOTED OTHERWISE IN THE PLANS.

**TOPOGRAPHY -- PLAN**



**EXISTING UTILITIES**

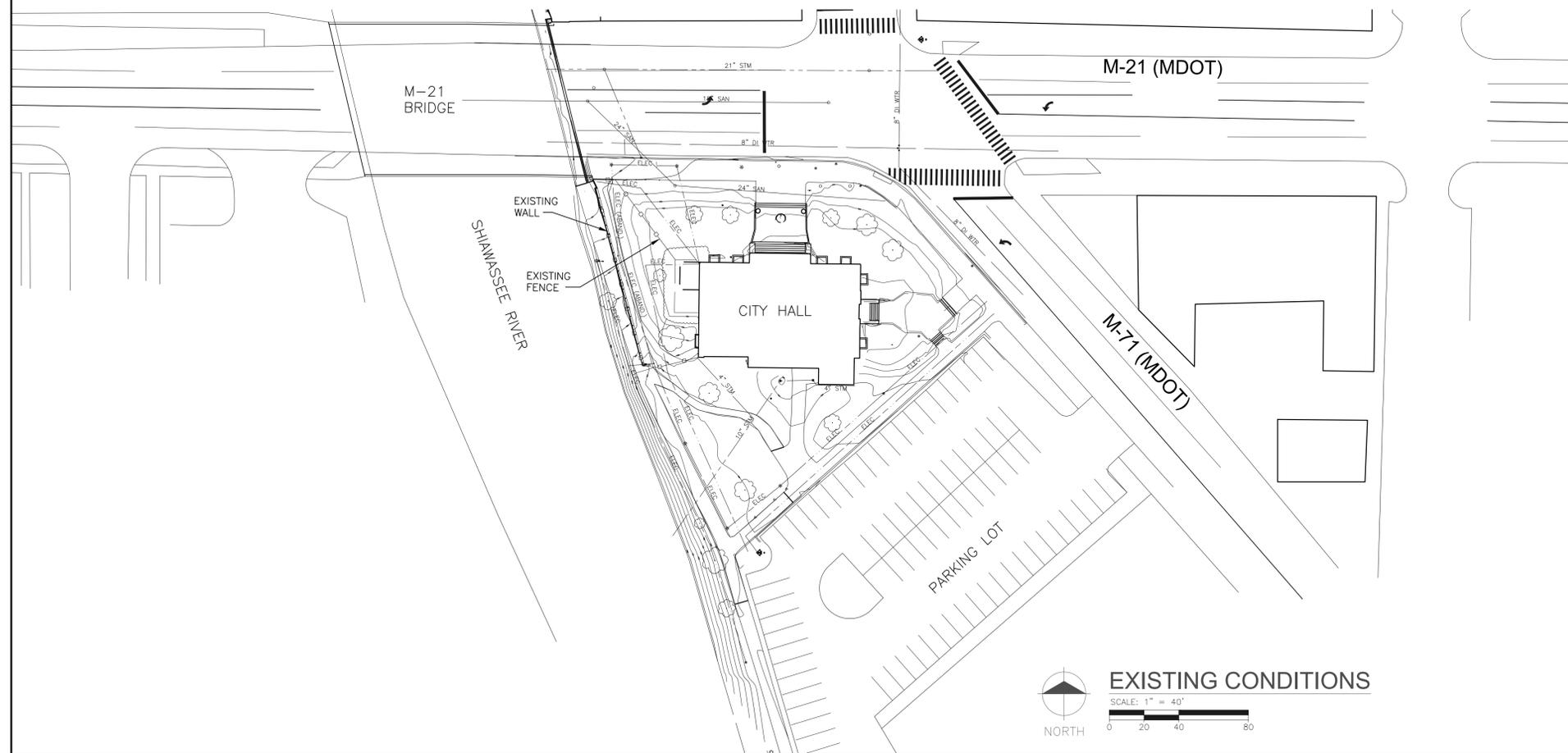
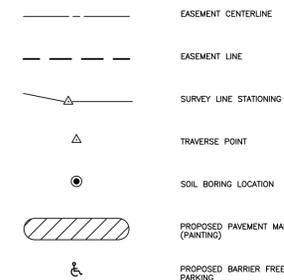


**BENCH MARK INFORMATION**

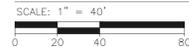
BENCH MARK A ELEVATION: 727.21  
 PAINTED "X" ON NORTHEAST CORNER OF CONCRETE TRANSFORMER PAD LOCATED APPROXIMATELY 105 FEET SOUTH OF CITY HALL ADJACENT TO PARKING LOT

BENCH MARK B ELEVATION: 731.75  
 PAINTED "X" ON SOUTHERLY ANCHOR BOLT OF TRAFFIC LIGHT STRAIN POLE LOCATED ON THE NORTHEAST CORNER OF E. MAIN ST. AND N. WATER ST.

**MISCELLANEOUS**



**EXISTING CONDITIONS**



ABBREVIATIONS			
ABBREV.	MEANING	ABBREV.	MEANING
ABAN.	ABANDON	GEN.	GENERATOR
ADJ.	ADJACENT	GND.	GROUND
AGG.	AGGREGATE	GPD	GALLONS PER DAY
ALT.	ALTERNATE	GPM	GALLONS PER MINUTE
APPR.	APPROVED	HDPE	HIGH DENSITY POLYETHYLENE
APPROX.	APPROXIMATE	HDWL	HEADWALL
B/B	BACK TO BACK	H.	HEIGHT
BTD.	BITUMINOUS	HORIZ.	HORIZONTAL
BLDG.	BUILDING	HP	HIGH POINT
BVD.	BOULEVARD	HWL	HIGH WATER LEVEL
BM	BENCH MARK	HWY.	HIGHWAY
BNDY.	BOUNDARY	HYD.	HYDRANT
BOT.	BOTTOM	I.D.	INSIDE DIAMETER
BSMT.	BASEMENT	INV	INVERT ELEVATION
C & G	CURB AND GUTTER	INCL.	INCLUDE
C/C	CENTER TO CENTER	LAT.	LATERAL
CATV	CABLE TELEVISION	LF	LINEAL FEET
CB	CATCH BASIN	LNTH.	LENGTH
CF	CUBIC FEET	LP	LOW POINT
SFS	CUBIC FEET PER SECOND	LS	LUMP SUM
CL	CENTERLINE	LWL	LOW WATER LEVEL
CMP	CORRUGATED METAL PIPE	MANT.	MAINTENANCE
CO.	CLEANOUT	MATL.	MATERIAL
CONC.	CONCRETE	MAX.	MAXIMUM
CONST.	CONSTRUCTION	MB.	MAILBOX
COORD.	COORDINATE	MDNR	MICHIGAN DEPARTMENT OF NATURAL RESOURCES
CP	COPPER PIPE	MDOT	MICHIGAN DEPARTMENT OF TRANSPORTATION
CSP	CORRUGATED STEEL PIPE	MDPH	MICHIGAN DEPARTMENT OF PUBLIC HEALTH
CSPA	CORRUGATED STEEL PIPE ARCH	MFR	MANUFACTURE
CULV.	CULVERT	MGD	MILLION GALLONS PER DAY
CY	CUBIC YARD	MH	MANHOLE
DEG. (°)	DEGREE	MN.	MINIMUM
DEMO.	DEMOLISH	MISC.	MISCELLANEOUS
DIP	DUCTILE IRON	MJ	MECHANICAL JOINT
DM.	DIMENSION	MON.	MONUMENT
DIST.	DISTANCE	NA	NOT APPLICABLE
EL.	ELEVATION	NIC	NOT IN CONTRACT
ENGR.	ENGINEER	NRCP	NON-REINFORCED CONCRETE PIPE
EDM	EDGE OF METAL	NTS	NOT TO SCALE
EQUIP.	EQUIPMENT	OC	ON CENTER
ESMT.	EASEMENT	OD	OUTSIDE DIAMETER
EXI.	EXISTING	OE	OVERHEAD ELECTRIC
EXT.	EXTERIOR	OP	OVERHEAD OPTIC
FAC.	FACE TO FACE	ORIG.	ORIGINAL
FDN.	FOUNDATION	OT	OVERHEAD TELEPHONE
FIG.	FIGURE	PC	POINT OF CURVE
FF	FINISH FLOOR	PCC	POINT OF COMPOUND CURVATURE
FIN. GR.	FINISH GRADE	PE	POLYETHYLENE
FTG.	FOOTING	PE PERF.	POLYETHYLENE PIPE PERFORATED
		PERF.	PERFORATED
		PI	POINT OF INTERSECTION
		PIV	POST INDICATOR VALVE
		PL	PROPERTY LINE
		PMB	POINT OF BEGINNING
		PDE	POINT OF ENDING
		PRC	POINT OF REVERSE CURVE
		PROP.	PROPOSED
		PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
		PT	POINT OF TANGENCY
		PVC	POLYVINAL CHLORIDE
		PVC	POINT OF VERTICAL CURVE
		PAI	POINT OF VERTICAL INTERSECTION
		PAVMT.	PAVEMENT
		PVI	POINT OF VERTICAL TANGENCY
		QTY.	QUANTITY
		R.	RADIUS
		RCP	REINFORCED CONCRETE PIPE
		RED.	REDUCER
		REF.	REFERENCE
		REQD.	REQUIRED
		REV.	REVISION
		RJ	RESTRAINED JOINT
		ROW	RIGHT OF WAY
		SF	SQUARE FOOT
		SPEC.	SPECIFICATION
		SS	SIDE SLOPE
		STA.	STATION
		STD.	STANDARD
		STL.	STEEL
		SYD	SQUARE YARD
		TC	TOP OF CURB
		TAN.	TANGENT
		TEMP.	TEMPORARY
		TOC	TOP OF CASTING
		TMW	TOP OF WALL
		TYP.	TYPICAL
		UDL.	UNDERDRAN
		UTL.	UTILITY
		VB	VALVE BOX
		VCP	VITRIFIED CLAY PIPE
		VERT.	VERTICAL
		W/O	WITHOUT
		WL	WATER LEVEL
		WFB	WELDED WIRE FABRIC
		XFMR.	TRANSFORMER

CITY OF OWOSSO, MICHIGAN  
 ENGINEERING DIVISION  
 DEPT. OF PUBLIC SERVICE

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BENCHMARK DATA	NO.	REVISIONS	DATE	BY
ELEV.				
DESCRIPTION				

NO.	REVISIONS	DATE	BY

**2020 RETAINING WALL PROJECT**

OWOSSO CITY HALL  
 EXISTING CONDITIONS

DATE PROJECT NO.  
 FIELD BOOK PG.  
**C-1**



**LEGEND**

—	SAWCUT
—	CURB REMOVAL
—	REMOVE PIPE
X	REMOVE OBJECT (WALL)
▨	REMOVE BITUMINOUS PAVEMENT FULL DEPTH
▩	REMOVE CONCRETE PAVEMENT
x	CHANNELIZING DEVICE - DRUM

- NOTES**
- THE EXTENT OF REMOVALS AND DEMOLITION SHALL BE FIELD VERIFIED BY ENGINEER PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DEVIATIONS FROM INFORMATION SHOWN.
  - PRIOR TO CONSTRUCTION ALL FENCING, BARRICADES, ENCLOSURES, ETC., MUST BE INSTALLED AND APPROVED BY OWNER OR ENGINEER.
  - DISPOSE OF DEMOLITION AND EXCAVATION MATERIALS IN ACCORDANCE WITH CONTRACT DOCUMENTS.
  - SOIL EROSION AND SEDIMENTATION CONTROL MEASURES MUST BE IN PLACE PRIOR TO STARTING REMOVALS AND DEMOLITION.
  - UNLESS SPECIFICALLY NOTED FOR REMOVAL ON THE PLANS, ALL SIDEWALKS, DRIVES, CULVERTS, DRAINAGE STRUCTURES, AND ABOVE AS WELL AS BELOW GRADE UTILITIES SHALL BE PROTECTED. ALL SUCH ITEMS DAMAGED OR DESTROYED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH NEW AT NO ADDITIONAL COST TO THE OWNER.
  - PROTECT EXISTING TREES TO REMAIN. NO GROUND DISTURBANCE OR STORAGE OF MATERIAL/EQUIPMENT SHALL OCCUR WITHIN THE DRIP LINE LIMITS.
  - ELECTRICAL, TELEPHONE, CABLE TV, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.
  - PERFORM CLEARING, CRUBBING, TREE AND STUMP REMOVAL, TOPSOIL REMOVAL AND STOCKPILING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
  - BEFORE REMOVING OR ABANDONING ANY UTILITY PIPES, VERIFY NEW UTILITY PIPE HAS BEEN INSTALLED, TESTED AND IS OPERATIONAL.
  - THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS DRAWING HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY CRITICAL INVERT INFORMATION PRIOR TO BEGINNING CONSTRUCTION.
  - DAMAGE CAUSED TO SURROUNDING AREA PAVEMENT OUTSIDE THE CONSTRUCTION LIMITS SHALL BE SAWCUT AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
  - COORDINATE SEQUENCING AND PHASING OF DEMOLITION WITH ENGINEER.
  - SEE OTHER DRAWINGS FOR ADDITIONAL SITE DEMOLITION WORK.
  - SAWCUT CURB AND GUTTER AND SIDEWALKS TO NEAREST JOINT.
  - CONTRACTOR MAY TEMPORARILY REMOVE, SALVAGE, AND REINSTALL ANY LIGHT POLES AT THEIR OWN EXPENSE, AND AS APPROVED BY THE ENGINEER.

- MAINTAINING TRAFFIC NOTES**
- SIGNS SHALL BE PLACED IN ACCORDANCE WITH MDOT MAINTAINING TRAFFIC TYPICALS INCLUDED IN THE SPECIFICATIONS.
  - ADJUST SIGN SPACING AS NECESSARY TO MEET MDOT REQUIREMENTS.
  - LANE CLOSURES ON M-21 ARE NOT ALLOWED. CONTRACTOR SHALL ACCESS THE SITE WITH EQUIPMENT AND MATERIALS FROM OTHER LOCATIONS OR OUT OF THE TRAVEL LANES OF M-21.

- KEY NOTES**
- SAWCUT AND REMOVE 4" CONCRETE SIDEWALK TO NEAREST JOINT.
  - REMOVE CONCRETE CURB.
  - REMOVE RETAINING WALL AND ALL APPURTENANCES.
  - PROTECT LIGHT POLE AND FIXTURE.
  - REMOVE CONCRETE PAD AND STEPS.
  - PROTECT TREE. TIE BACK OR TRIM BRANCHES AS REQUIRED FOR CONSTRUCTION. COORDINATE TRIMMING WITH OWNER.
  - PROTECT SIGN.
  - REMOVE 4" CONCRETE SIDEWALK.

PLACE PEDESTRIAN BARRICADES NORTH OF BRIDGE

END WALL REMOVAL

PLACE TEMPORARY FENCING AROUND WORK SITE

CITY OF OWOSSO TO TEMPORARILY REMOVE AND REINSTALL OR REROUTE ELECTRIC LINES IF NEEDED. SEE PROGRESS CLAUSE.

**ESTIMATED QUANTITIES**

QUANTITY	UNIT	ITEM
1	LSUM	STRUCTURES, REM
225	SYD	SIDEWALK, REM

LIGHT POLE REMOVED BY OTHERS  
(TO BE SALVAGED AND REUSED)

TREE REMOVED BY OTHERS

REMOVE AND SALVAGE  
EXISTING FENCE

START WALL REMOVAL  
LIGHT POLE REMOVED BY OTHERS  
(TO BE SALVAGED AND REUSED)

TREE TRIMMED BY OTHERS  
ADD ALTERNATE 1

PLACE PEDESTRIAN BARRICADES

**ADD ALTERNATE 1 ESTIMATED QUANTITIES**

QUANTITY	UNIT	ITEM
160	SYD	SIDEWALK, REM

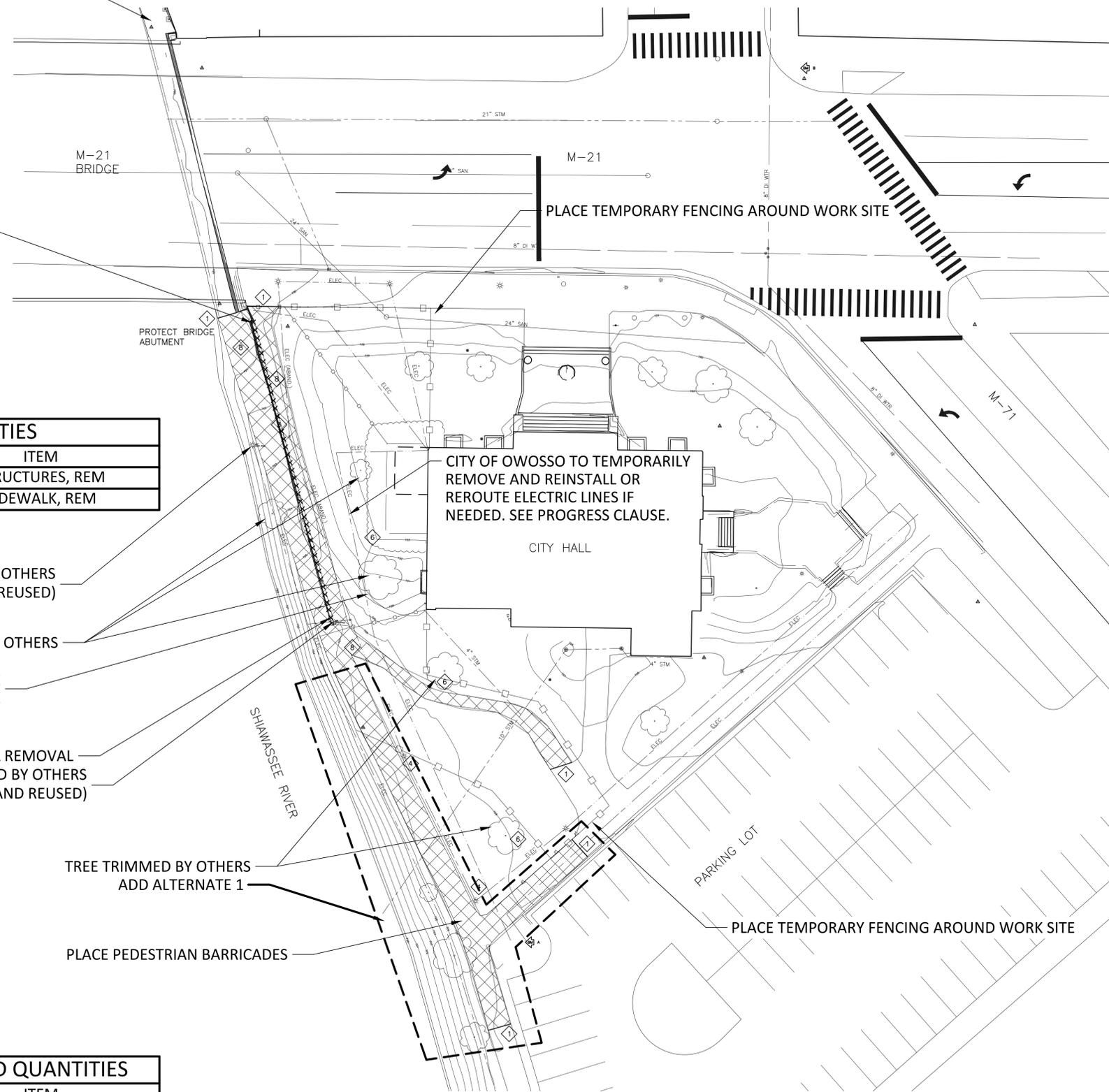
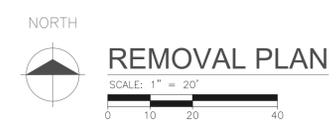
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DESCRIPTION	1	IFB	2/10/20	CW	
ELEV.					
					ORIGINAL PLAN
					CHECKED BY

**2020 RETAINING WALL PROJECT**

OWOSSO CITY HALL  
REMOVAL PLAN

DATE PROJECT NO.  
FIELD BOOK PG.

**C-3**



**LEGEND**

	ASPHALT PAVEMENT
	CONCRETE PAVEMENT
	TURF ESTABLISHMENT, PERFORMANCE
	6" THICK CONCRETE SIDEWALK
	EXPANSION JOINT
	SITE LIGHT POLE
	PROPOSED SPOT ELEVATION

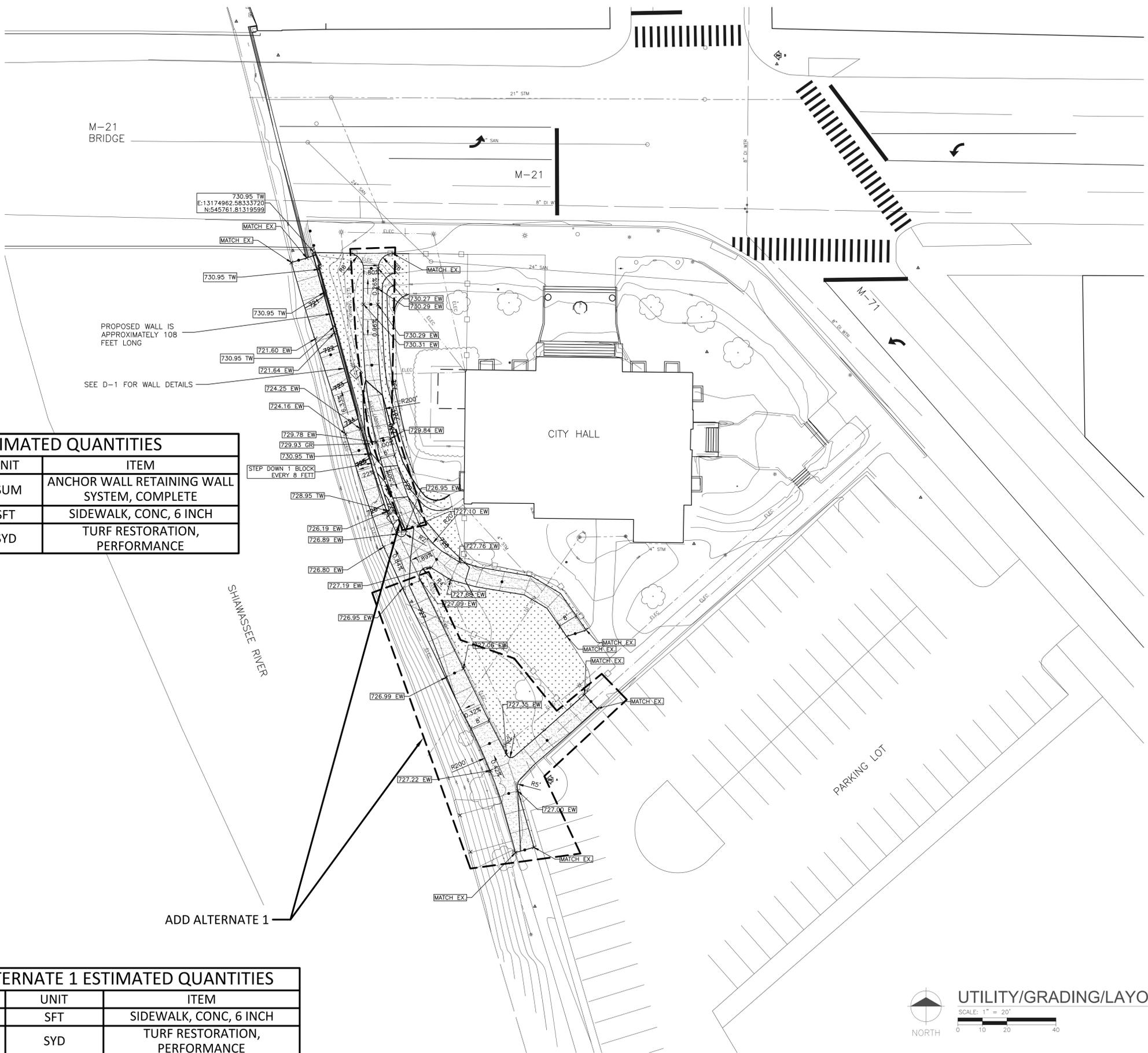
- NOTES**
- DIMENSIONS ARE TO FACE OF CURB, OUTSIDE FACE OF BUILDING, AND EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
  - EXISTING UTILITIES LOCATIONS SHOWN ARE APPROXIMATE.
  - VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO EXCAVATION WHERE NECESSARY.
  - PROTECT AND MAINTAIN SERVICE OF OTHER UTILITIES AT CROSSINGS.
  - DO NOT CONNECT ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER SERVICES TO THE SANITARY SEWER.
  - PROVIDE AND MAINTAIN INLET FILTERS AT ALL CATCH BASIN INLETS, DURING CONSTRUCTION.
  - ADJUST ALL CASTINGS TO FINISH GRADES.
  - LANE CLOSURES ON M-21 ARE NOT ALLOWED
  - ALL SPOT ELEVATIONS ARE TO:  
EDGE OF WALK - (EW)  
TOP OF WALL - (TW)  
FINISHED GRADE - (GR)  
UNLESS NOTED OTHERWISE
  - AREAS DAMAGED BY THE CONTRACTOR OUTSIDE THE WORK AREA NEEDING CONCRETE OR TURF RESTORATION WILL NOT BE ELIGIBLE FOR PAYMENT.

**BENCH MARK INFORMATION**

BENCH MARK A ELEVATION: 727.21  
PAINTED "X" ON NORTHEAST CORNER OF CONCRETE TRANSFORMER PAD LOCATED APPROXIMATELY 105 FEET SOUTH OF CITY HALL ADJACENT TO PARKING LOT

BENCH MARK B ELEVATION: 731.75  
PAINTED "X" ON SOUTHERLY ANCHOR BOLT OF TRAFFIC LIGHT STRAIN POLE LOCATED ON THE NORTHEAST CORNER OF E. MAIN ST. AND N. WATER ST.

- KEY NOTES**
- SITE LIGHTING FIXTURE AND BASE TO BE RE-INSTALLED BY OWOSSO DPW CREWS. OWOSSO DPW CREWS SHALL EXTEND, MODIFY, RE-ROUTE OR REPLACE CONDUITS AS REQUIRED TO FIT NEW SITE LIGHTING LOCATION AND ARRANGEMENT. SPLICING OF CONDUCTORS IS ONLY ALLOWED IN HANDHOLES. SEE PROGRESS CLAUSE. COST INCLUDED AS PART OF OTHER ITEMS.



**ESTIMATED QUANTITIES**

QUANTITY	UNIT	ITEM
1	LSUM	ANCHOR WALL RETAINING WALL SYSTEM, COMPLETE
1560	SFT	SIDEWALK, CONC, 6 INCH
175	SYD	TURF RESTORATION, PERFORMANCE

**ADD ALTERNATE 1 ESTIMATED QUANTITIES**

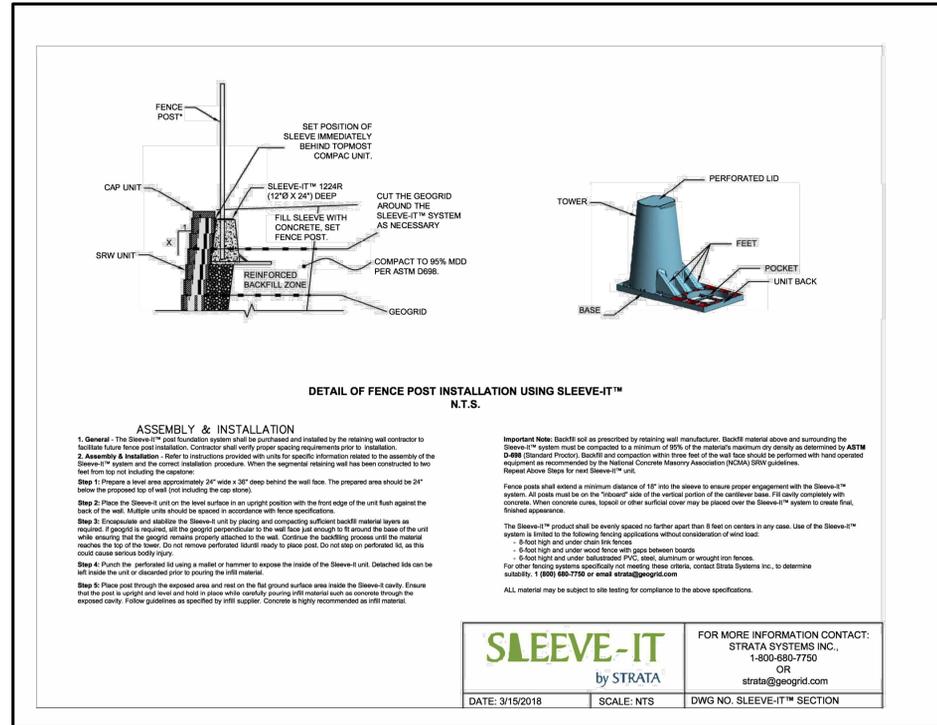
QUANTITY	UNIT	ITEM
2215	SFT	SIDEWALK, CONC, 6 INCH
350	SYD	TURF RESTORATION, PERFORMANCE

BENCHMARK DATA	ELEV.	DESCRIPTION	NO.	REVISIONS	DATE	BY
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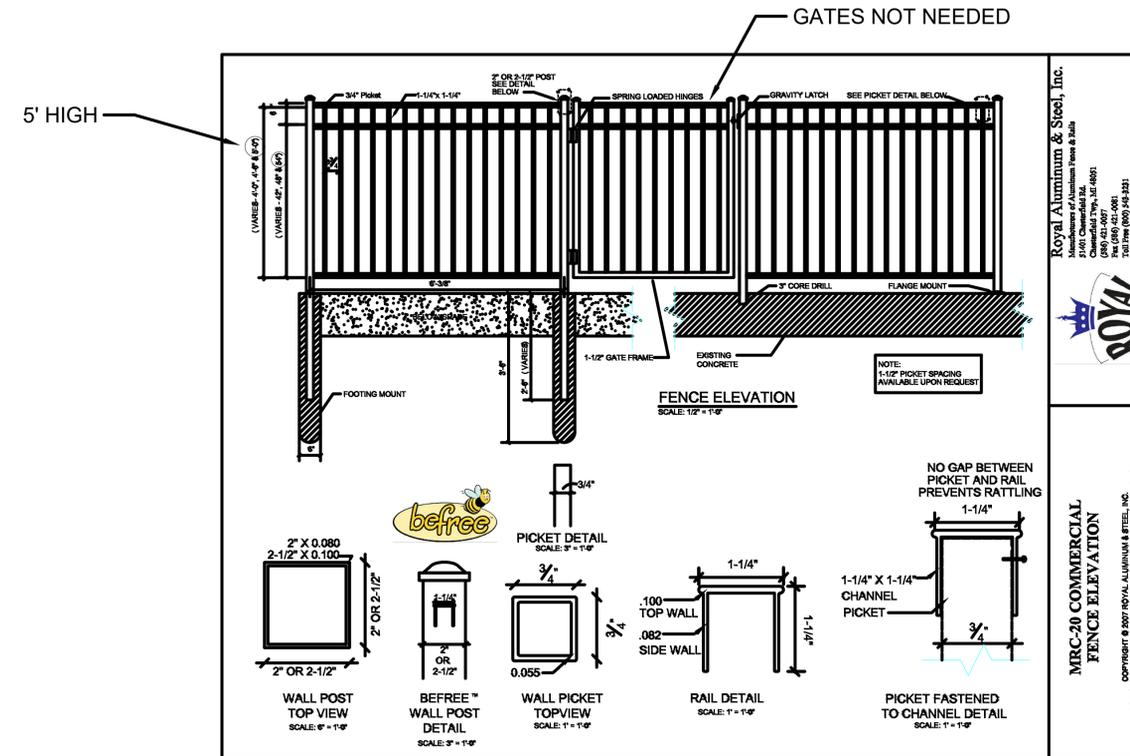
2020 RETAINING WALL PROJECT	OWOSSO CITY HALL UTILITY/GRADING/LAYOUT PLAN	DATE PROJECT NO.	FIELD BOOK PG.
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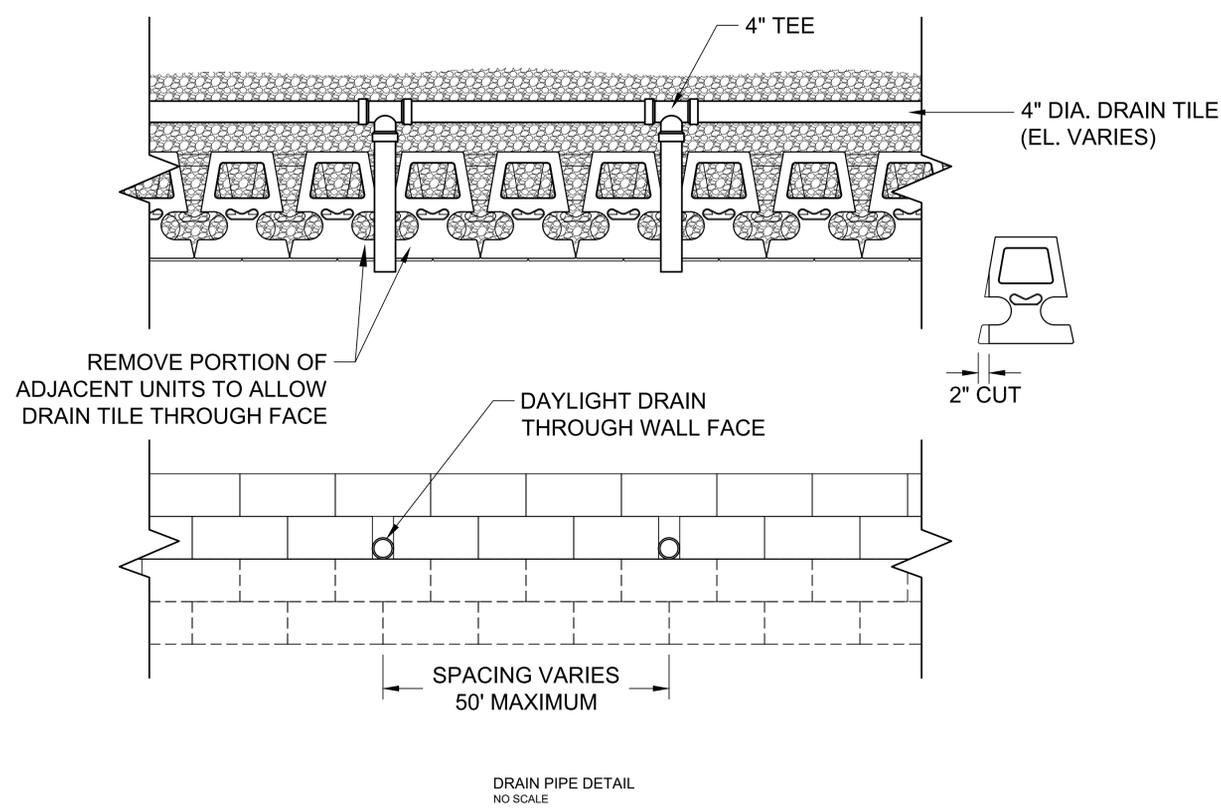




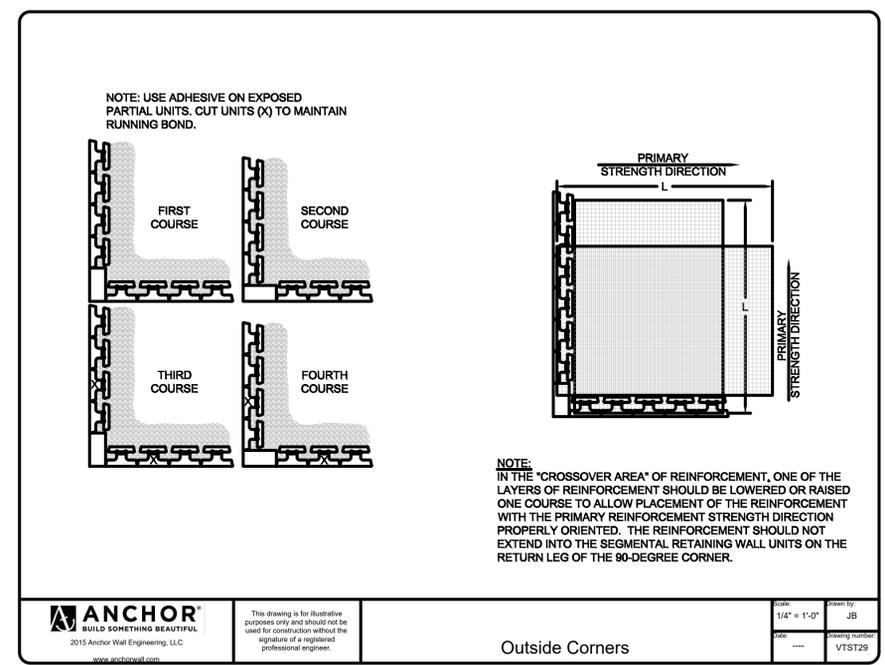
RAILING POST INSTALLATION  
NO SCALE



RAILING ON RETAINING WALL  
NO SCALE



DRAIN PIPE DETAIL  
NO SCALE



END TREATMENT DETAIL  
NO SCALE

CITY OF OWOSSO, MICHIGAN ENGINEERING DIVISION DEPT. OF PUBLIC SERVICE		2020 RETAINING WALL PROJECT		OWOSSO CITY HALL DETAIL SHEET		D-2	
NO.	REVISIONS	DATE	BY	DATE	BY	DATE	BY
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BENCHMARK DATA				FIELD BOOK			
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