

City of Wyoming

Bayberry Flooding Improvements

City of Wyoming, Kent County, Michigan

Issued for Owner Review September 17, 2014
Project Number G130701



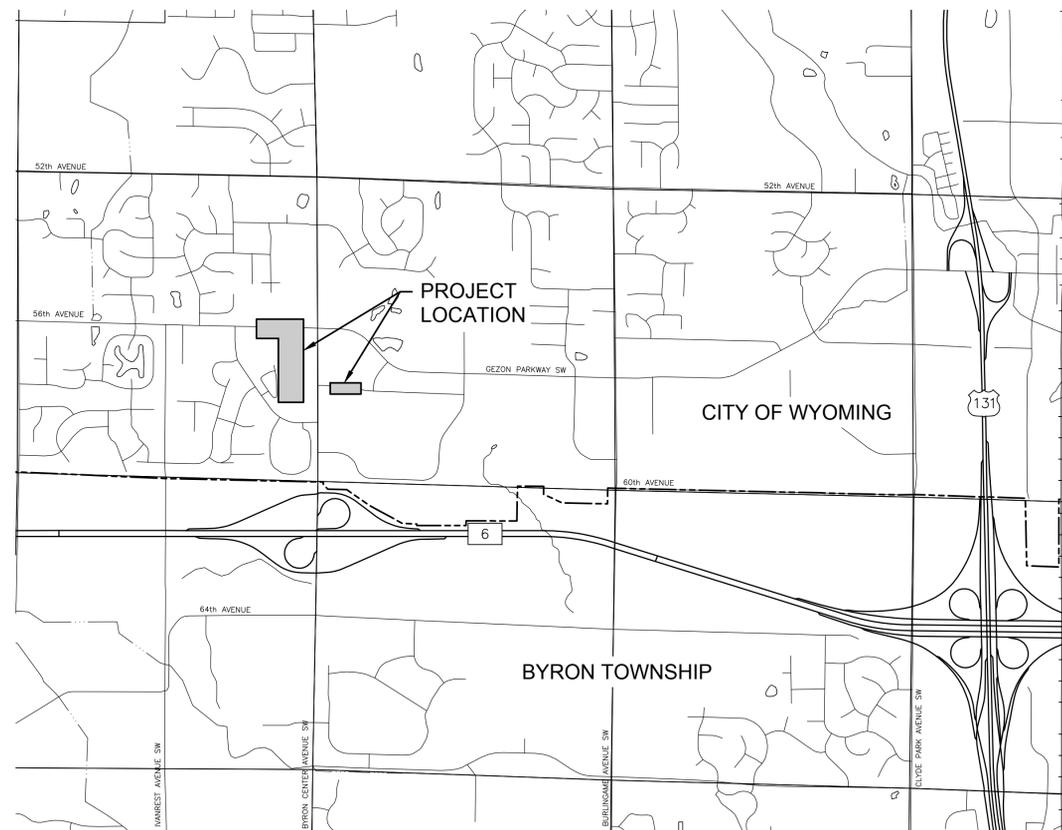
Fishbeck, Thompson, Carr & Huber, Inc.

Engineers • Scientists • Architects • Constructors
1515 Arboretum Drive, Grand Rapids, Michigan 49546
(800) 456-3824 www.ftch.com

CIVIL

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LOCATION MAP



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.

- CONSUMERS ENERGY (ELECTRIC)
PO BOX 201
GRAND RAPIDS, MI 49501-0201
(616) 530-4244
- AT&T (TELEPHONE)
ROOM 5 (PROJECTS N. OF FRANKLIN ST.)
2ND FLOOR (PROJECTS S. OF FRANKLIN ST.)
955 36TH ST. SE
GRAND RAPIDS, MI 49508
(616) 246-7203 (PROJECTS N. OF FRANKLIN ST.)
(616) 246-7210 (PROJECTS S. OF FRANKLIN ST.)
- DTE ENERGY (NATURAL GAS)
444 WEALTHY ST. SW
GRAND RAPIDS, MI 49503
(800) 947-5000
- COMCAST (CABLE TV)
955 CENTURY AVE. SW
GRAND RAPIDS, MI 49503
(616) 245-5039
- VERIZON BUSINESS (FIBER OPTICS)
2855 OAK INDUSTRIAL DR. NE
GRAND RAPIDS, MI 49505
(616) 224-4944
- CENTURY TEL (FIBER OPTICS)
320 N. WASHINGTON SQUARE
LANSING, MI 48933
(989) 239-8110
- CHOICEONE (FIBER OPTICS)
44 GRANDVILLE AVE. SW, STE. 400
GRAND RAPIDS, MI 49503
(616) 988-7100
- US SIGNAL COMPANY, LLC (FIBER OPTICS)
20 MONROE AVE. NW
GRAND RAPIDS, MI 49503
(616) 988-7031
- LDMI
3355 EAGLE PARK DR. NE, STE. 102
GRAND RAPIDS, MI 49525
(616) 493-5364

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CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

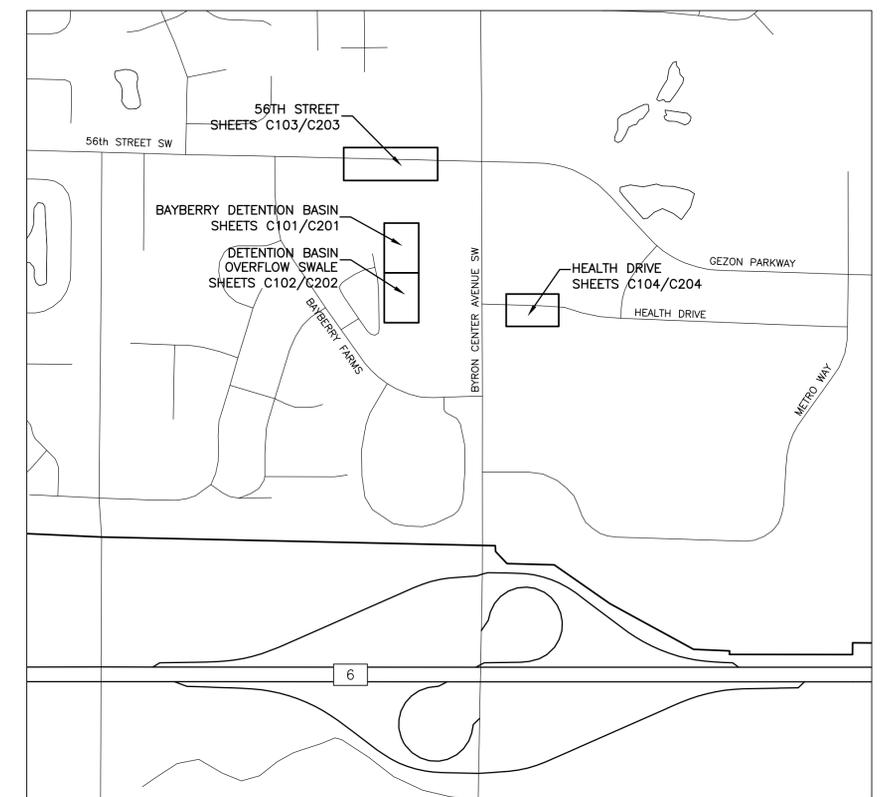
IN				
FROM				
TO				
SCALE: VERT. 1" = 5'	ELECTRIC	GAS	TELEPHONE	CABLE TV
HORIZ. 1" = 10'				
SHEET NO.				
SYSTEM NO.				CITY MANAGER
SA. NO.				
DRAWN BY: FTC&H				CITY ENGINEER
DESIGNED BY: NRT				
CHECKED BY: CES				DESIGN ENGINEER
1/4 SEC. NO. 1/4 SEC. NO.				
DATE DRAWN August 6, 2014	SHEET NO. G001			

SITE PLAN ABBREVIATIONS

ABBREV.	MEANING	ABBREV.	MEANING	ABBREV.	MEANING
ABAN.	ABANDON	ABAN.	ABANDON	PRC	POINT OF REVERSE CURVE
ADJ.	ADJACENT	GPD	GALLONS PER DAY	PROP.	PROPOSED
AGG.	AGGREGATE	GPM	GALLONS PER MINUTE	PSF	POUNDS PER SQUARE FOOT
ALT.	ALTERNATE	HDPE	HIGH DENSITY POLYETHYLENE	PSI	POUNDS PER SQUARE INCH
APPD.	APPROVED	H.	HEIGHT	PT	POINT OF TANGENCY
APPROX.	APPROXIMATE	HORIZ.	HORIZONTAL	PVC	POLYVINYL CHLORIDE
B/B	BACK TO BACK	HP	HIGH POINT	PVC	POINT OF VERTICAL CURVE
BIT.	BITUMINOUS	HWL	HIGH WATER LEVEL	PVI	POINT OF VERTICAL INTERSECTION
BLDG.	BUILDING	HWY.	HIGHWAY	PVMT.	PAVEMENT
BLVD.	BOULEVARD	HYD.	HYDRANT	PVT	POINT OF VERTICAL TANGENCY
BM	BENCH MARK	ID	INSIDE DIAMETER	QTY.	QUANTITY
BNDY.	BOUNDARY	INV	INVERT ELEVATION	R.	RADIUS
BOT.	BOTTOM	INCL.	INCLUDE	RCP	REINFORCED CONCRETE PIPE
BSMT.	BASEMENT	LAT.	LATERAL	RED.	REDUCER
C & G	CURB AND GUTTER	LF	LINEAL FEET	REF.	REFERENCE
C/C	CENTER TO CENTER	L	LENGTH	REQD.	REQUIRED
CATV	CABLE TELEVISION	LP	LOW POINT	REV.	REVISION
CB	CATCH BASIN	LS	LUMP SUM	RJ	RESTRAINED JOINT
CF	CUBIC FEET	LWL	LOW WATER LEVEL	ROW	RIGHT OF WAY
CFS	CUBIC FEET PER SECOND	M/L	MORE OR LESS	SAN	SANITARY SEWER
CL	CENTERLINE	MAINT.	MAINTENANCE	SF	SQUARE FOOT
CMP	CORRUGATED METAL PIPE	MATL.	MATERIAL	SPEC.	SPECIFICATION
CO.	CLEAN OUT	MAX.	MAXIMUM	SS	SIDE SLOPE
CONC.	CONCRETE	MB	MAILBOX	STA.	STATION
CONSTR.	CONSTRUCTION	MDNR	MICHIGAN DEPARTMENT OF NATURAL RESOURCES	STD.	STANDARD
COORD.	COORDINATE	MDOT	MICHIGAN DEPARTMENT OF TRANSPORTATION	STL.	STEEL
CP	COPPER PIPE	MDPH	MICHIGAN DEPARTMENT OF PUBLIC HEALTH	STM	STORM SEWER
CSP	CORRUGATED STEEL PIPE	MFGR	MANUFACTURER	SYD	SQUARE YARD
CSPA	CORRUGATED STEEL PIPE ARCH	MGD	MILLION GALLONS PER DAY	TC	TOP OF CURB
CULV.	CULVERT	MH	MANHOLE	TAN.	TANGENT
CY	CUBIC YARD	MIN.	MINIMUM	TEL	TELEPHONE LINE
DEG (°)	DEGREE	MISC.	MISCELLANEOUS	TEMP.	TEMPORARY
DEMO.	DEMOLISH	MJ	MECHANICAL JOINT	TOC	TOP OF CASTING
DIP	DUCTILE IRON	MON.	MONUMENT	T/W	TOP OF WALL
DIA.	DIAMETER	NA	NOT APPLICABLE	TRPT	TRAVERSE POINT
DIM.	DIMENSION	NIC	NOT IN CONTRACT	TYP.	TYPICAL
DIST.	DISTANCE	NRCP	NON-REINFORCED CONCRETE PIPE	UD	UNDER DRAIN
ELEC.	ELECTRIC CONDUIT	NTS	NOT TO SCALE	UTIL.	UTILITY
EL.	ELEVATION	OC	ON CENTER	VB	VALVE BOX
ENGR.	ENGINEER	OD	OUTSIDE DIAMETER	VCP	VITRIFIED CLAY PIPE
EOM	EDGE OF METAL	OE	OVERHEAD ELECTRIC	VERT.	VERTICAL
EQUIP.	EQUIPMENT	OP	FIBER OPTICS	W/	WITH
ESMT.	EASEMENT	ORIG.	ORIGINAL	W/O	WITHOUT
EXIST. EX.	EXISTING	OT	OVERHEAD TELEPHONE	WL	WATER LEVEL
EXT.	EXTERIOR	PC	POINT OF CURVE	WTR	WATER MAIN
F/F	FACE TO FACE	PCC	POINT OF COMPOUND CURVATURE	WWF	WELDED WIRE FABRIC
FDN.	FOUNDATION	PE	POLYETHYLENE	XFMR.	TRANSFORMER
FIG.	FIGURE	PE PERF.	POLYETHYLENE PIPE PERFORATED		
FF	FINISH FLOOR	PERF.	PERFORATED		
FIN. GR.	FINISH GRADE	PI	POINT OF INTERSECTION		
FM	FORCE MAIN	PIV	POST INDICATOR VALVE		
FTG.	FOOTING	PL	PROPERTY LINE		
GEN.	GENERATOR	POB	POINT OF BEGINNING		
GND.	GROUND	POE	POINT OF ENDING		

9/17/14	OWNER REVIEW		
DATE	REVISIONS	BY	

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SITE SYMBOL LEGEND

SURVEY	TOPOGRAPHY - PLAN	EXISTING UTILITIES	PROPOSED UTILITIES	DEMOLITION	MISCELLANEOUS
BENCH MARK	SHRUBS	8" SAN. SANITARY SEWER & MANHOLE	8" SAN. SANITARY SEWER & MANHOLE	SAWCUT	SOIL EROSION CONTROL MEASURES
SECTION CORNER	CONIFEROUS TREE	12" STM. STORM SEWER & MANHOLE	WYE & LEAD	CURB REMOVAL	TEMPORARY MEASURE
CENTER OF SECTION	DECIDUOUS TREE	CATCH BASIN CURB TYPE	RISER & LEAD	REMOVE PIPE	PERMANENT MEASURE
QUARTER CORNER	HEDGE	CATCH BASIN LAWN TYPE	STANDARD SEWER CLEAN OUT	REMOVE OBJECT	
CONCRETE MONUMENT	EDGE OF WOODS	VALVE	MAX. ELEVATION OF LOT LEAD AT PROPERTY LINE	REMOVE BUILDING	
PROPERTY IRON	MARSH (SWAMP)	HYDRANT	632.56	REMOVE BITUMINOUS PAVEMENT FULL DEPTH	
SET PROPERTY IRON	EXISTING DITCH	PLUG	12" STM. STORM SEWER & MANHOLE	REMOVE CONCRETE PAVEMENT	
LOT LINE (AS PLATTED)	PROPOSED DITCH	6" WTR. WATER MAIN	CATCH BASIN	TREE PROTECTION	
PROPERTY HOOK (COMMON PROPERTY OWNERSHIP)	EDGE OF WATER	4" FM. FORCE MAIN	UNDER DRAIN	TREE REMOVAL	
TITLE LINE / PROPERTY LINE	CONTOUR MAJOR	2" GAS. GAS MAIN	8" WATER WATER MAIN		
ROW LINE	CONTOUR MINOR	ELEC. UNDERGROUND ELECTRIC	VALVE & BOX		
SECTION LINE	MONITORING WELL	OP. FIBER OPTICS	VALVE & CHAMBER		
EASEMENT CENTERLINE	SOIL BORING	TEL. UNDERGROUND TELEPHONE	METER		
EASEMENT LINE	GUY ANCHOR	2" OIL. OIL TRANSMISSION LINE	PLUG		
SURVEY LINE STATIONING	UTILITY POLE	6" STEAM. UNDERGROUND STEAM	STANDARD FIRE HYDRANT ASSEMBLY		
TRAVERSE POINT	SIGN	2" SPRINK. UNDERGROUND SPRINKLER	CURB STOP & BOX		
SOIL BORING LOCATION	FLAG POLE	CATV. CABLE TELEVISION	FORCE MAIN		
	MAIL BOX	TELEPHONE PEDESTAL	FORCE MAIN AIR RELEASE STRUCTURE		
	PARKING METER	PIPE-ONLY CULVERT	GAS PIPE		
	RAILROAD TRACKS SCALE: 1" = 60' OR LESS	FLARED END SECTION CULVERT	TELEPHONE LINE		
	RAILROAD TRACKS SCALE: 1" = 100' OR MORE	HEADWALL CULVERT	12" CSP. PIPE-ONLY CULVERT		
		UTILITY FLOW ARROW	FLARED END SECTION CULVERT		
			HEADWALL CULVERT		

ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS

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1/4 SEC. NO.				
GATE DRAWN				

August 6, 2014

SHEET NO. C001

PLOT INFO: Z:\2013\130701\CAD\C001\130701.DWG LAYOUT: C001 DATE: 9/17/2014 TIME: 10:12:17 AM USER: NRT

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.
- 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.
- 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.
- 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.
- PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE. RESTORE/REPLACE DAMAGED IMPROVEMENTS TO ORIGINAL CONDITION ACCEPTABLE TO PARTIES HAVING JURISDICTION AT NO ADDITIONAL COST TO THE OWNER.
- PROTECT TREES TO REMAIN FROM DAMAGE DURING CONSTRUCTION.
- HIRE A LICENSED LAND SURVEYOR TO WITNESS AND REPLACE ALL PROPERTY IRONS/SURVEY MONUMENTS WHICH WILL BE ALTERED IN ANY WAY DURING CONSTRUCTION.
- 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.
- RESTORE ALL DISTURBED AREAS NOT COVERED BY OTHER SURFACE TREATMENT WITH 4" TOPSOIL, SEED, FERTILIZER, MULCH OR MULCH BLANKET IF SLOPES ARE 3:1 OR STEEPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- ALL TRAFFIC CONTROL DEVICES USED ON THIS PROJECT SHALL MEET THE REQUIREMENTS OF THE MOST RECENT EDITIONS OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) "QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES". TRAFFIC CONTROL DEVICES ARE INCLUSIVE OF SIGNS, BARRICADES, VERTICAL PANELS, DRUMS, WARNING LIGHTS ARROW BOARDS, CHANGEABLE MESSAGE SIGNS, CONES, TUBULAR MARKERS, PAVEMENT TAPE, PAINT AND PAVEMENT MARKERS.
- ALL TRAFFIC CONTROL DEVICES INCLUDING SIGNS AND PAVEMENT MARKINGS REMOVAL AND INSTALLATIONS SHALL BE MAINTAINED AND/OR INSTALLED IN ACCORDANCE WITH CURRENT MDOT STANDARDS AND SPECIFICATIONS. CHARGES SHALL BE THE SOLE RESPONSIBILITY OF THE PERMIT APPLICANT.
- A SAFE AND ADEQUATE TRAVEL ROUTE FOR PEDESTRIANS SHALL BE MAINTAINED AT ALL TIMES. PEDESTRIANS SHALL NOT BE DETOURED INTO THE EXISTING ROADWAY.
- APPLICABLE WARNING, REGULATORY, AND GUIDE SIGNS SHALL NOT BE REMOVED BUT SHALL BE RETAINED DURING THE PROGRESS OF THE WORK IN THEIR EXISTING LOCATION UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT OR ITS INSPECTOR.

DEMOLITION NOTES

- THE EXTENT OF REMOVALS AND DEMOLITION SHALL BE FIELD VERIFIED BY CONSTRUCTION MANAGER 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 CONSTRUCTION MANAGER.
- 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.
- 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, GRUBBING, 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.
- DAMAGE CAUSED TO SURROUNDING AREA PAVEMENT OUTSIDE THE CONSTRUCTION LIMITS SHALL BE SAWCUT AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- REMOVE AND REPLACE SIDEWALKS AS DIRECTED BY THE FIELD INSPECTOR. UNLESS OTHERWISE SPECIFIED, SIDEWALKS SHALL BE REPLACED IN KIND.
- SAW CUT THE EXISTING CONCRETE CURB AND GUTTER AND APPROACHES FULL DEPTH AND REMOVE IT PRIOR TO PLACEMENT OF DRIVEWAY APPROACHES AND CLOSING THE EXISTING CURB DROPS.
- SAWCUTTING EXISTING BITUMINOUS OR CONCRETE SURFACES TO THE LIMITS OF CONSTRUCTION OR AS DIRECTED BY THE CONSTRUCTION MANAGER SHALL BE INCLUDED IN REMOVING PAVEMENT. THIS ALSO INCLUDES SAWCUTTING DRIVES OR WALKS AT THE REPLACEMENT LIMITS. SIDEWALK SHALL BE SAWCUT AT THE NEAREST JOINT TO THE REMOVAL LIMITS AS NOTED ON THE PLANS. IF THE EDGE IS DAMAGED SUBSEQUENT TO SAWCUTTING, THE EDGE SHALL BE RECUT AT NO ADDITIONAL COST TO THE OWNER.
- 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.

EROSION CONTROL NOTES

- CONSTRUCT AND MAINTAIN ALL SOIL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE COUNTY ENFORCING AGENCY, CITY REQUIREMENTS AND PROJECT DOCUMENTS.
- SECURE PERMIT AND CONSTRUCT PROJECT IN COMPLIANCE WITH PART 91 OF ACT NO. 451 OF 1994 AS AMENDED, OF THE STATE COMPILED LAWS ENTITLED "SOIL EROSION AND SEDIMENTATION CONTROL" UNDER THE CONTROL OF THE LOCAL PERMIT AGENCY CHARGED WITH ADMINISTERING THE PROVISIONS OF THE ACT. FOLLOW THE PROCEDURES DELINEATED BELOW AND CONSTRUCT AND MAINTAIN THE FACILITIES SHOWN ON THE DRAWINGS AND AS REQUIRED TO CONTROL WATER AND WIND EROSION DURING CONSTRUCTION OF THE PROJECT.
- OBTAIN A NOTICE OF COVERAGE (NOC) UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FOR CONSTRUCTION SITES AND PROVIDE A CERTIFIED STORMWATER OPERATOR FOR THE SITE.
- CONSTRUCT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO STARTING CONSTRUCTION. MEASURES INDICATED ON THESE PLANS ARE CONSIDERED TO BE MINIMUM AND SHALL BE SUPPLEMENTED AS REQUIRED BY CONSTRUCTION PHASING AND SITE CONDITIONS.
- ANY EROSION AND SEDIMENT FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT IN ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKE AND PONDS.
- DIRECT ALL DEWATERING ACTIVITIES TO THE PROPOSED STORM SYSTEM. PASS ALL WATER THROUGH A FILTER PRIOR TO OUTLETTING TO THE SYSTEM.
- ENSURE SOIL AND DEBRIS FROM THE SITE REMAINS ON SITE THROUGH THE USE OF CLEAN STONE EXITS. DIRECT ALL CONSTRUCTION TRAFFIC TO THESE EXITS. STONE EXITS MUST BE MAINTAINED AS NECESSARY. ADD ADDITIONAL STONE WHEN ACCESS ROAD BECOMES INEFFECTIVE DUE TO LOSS OF STONE OR COVERED WITH MUD.
- FINAL SITE SOIL EROSION CONTROL STABILIZATION, SUCH AS SEED OR SOD, IS TO BE COMPLETED WITHIN FIVE (5) DAYS OF FINAL GRADING.
- INSPECT THE SOIL EROSION AND SEDIMENT CONTROL DEVICES ONCE EACH WEEK AND WITHIN TWENTY-FOUR (24) HOURS OF A PRECIPITATION EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. A LOG OF INSPECTION REPORTS SHALL BE MAINTAINED AND ACCESSIBLE IN ACCORDANCE WITH NPDES REQUIREMENTS. THE FOLLOWING STEPS SHALL BE IMPLEMENTED IF ANY DAMAGE HAS RESULTED FROM CONSTRUCTION OR WEAR.
- MAINTAIN DUST CONTROL AT ALL TIMES DURING CONSTRUCTION. SPRINKLING TANK TRUCKS SHALL BE AVAILABLE AT ALL TIMES AND USED ON HAUL ROAD, ON-SITE DISTURBED AREAS, OR OTHER PLACES WHERE DUST BECOMES A PROBLEM AS A RESULT OF CONSTRUCTION EFFORTS.
- PROMPTLY REMOVE ALL MUD, DIRT AND DEBRIS TRACKED ONTO EXISTING ROADS FROM THIS SITE.

UTILITY NOTES

- PROTECT AND MAINTAIN CROSSINGS OF OTHER UTILITIES.
- REINFORCED CONCRETE PIPE SHALL MEET THE REQUIREMENTS OF ASTM C76, CLASS IV, "B" WALL WITH PREMIUM JOINTS.
- PVC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D3034, SDR 35, PERFORATED AND NONPERFORATED PIPE WITH SOLVENT CEMENT JOINTS.
- HDPE PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M252, CORRUGATED POLYETHYLENE DRAINAGE TUBING, PERFORATED AND NONPERFORATED PIPE WITH COUPLING BANDS.

LAYOUT NOTES

- 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.
- DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS. REFER DISCREPANCIES TO THE ENGINEER FOR CLARIFICATION.
- USE (2) TWO BENCH MARKS FOR VERIFICATION OF ALL CONSTRUCTION ELEVATIONS. SET ADDITIONAL BENCH MARKS TO COMPLY WITH THIS REQUIREMENT.
- DIMENSIONS ARE TO FACE OF CURB, OUTSIDE OF BUILDING FOUNDATIONS, OR EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
- DIMENSIONS ARE TO CENTER OF STRUCTURES UNLESS OTHERWISE NOTED.
- VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- TAPER THE CURB TO ZERO HEIGHT AT THE SIDEWALK OR RAMP THE SIDEWALK TO MEET THE DRIVEWAY GRADES IN ACCORDANCE WITH MDOT STANDARD R-28-EM TYPE I.

SHOP DRAWING SUBMITTALS

SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS:

- MODULAR CONCRETE BLOCK RETAINING WALL
- DETENTION BASIN OUTLET STRUCTURE (WITH TRASH RACK)
- DETENTION BASIN CONCRETE SPILLWAY
- TRENCH DRAIN WITH CATCH BASIN LEAD (HEALTH DRIVE)
- CATCH BASIN VANE GRATE (HEALTH DRIVE)

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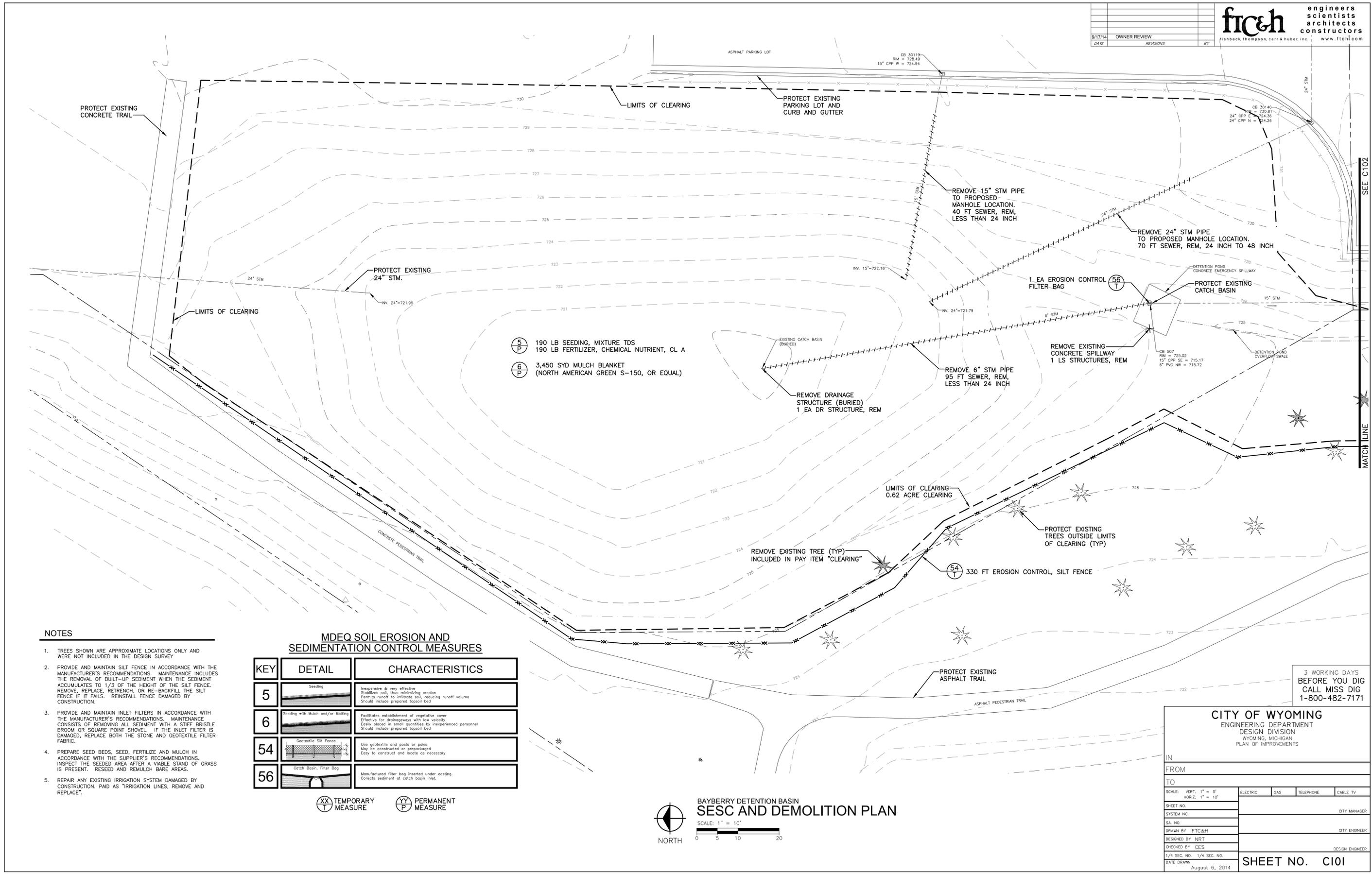
ftc&h engineers
scientists
architects
constructors
fishbeck, thompson, carr & huber, inc. www.ftc.com

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ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

IN	
FROM	
TO	
SCALE: VERT. 1" = 5' HORIZ. 1" = 10'	ELECTRIC GAS TELEPHONE CABLE TV
SHEET NO.	
SYSTEM NO.	CITY MANAGER
SA. NO.	
DRAWN BY: FTC&H	CITY ENGINEER
DESIGNED BY: NRT	
CHECKED BY: CES	DESIGN ENGINEER
1/4 SEC. NO. 1/4 SEC. NO.	
DATE DRAWN: August 6, 2014	SHEET NO. C002

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DATE	REVISIONS	BY	



NOTES

- TREES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND WERE NOT INCLUDED IN THE DESIGN SURVEY.
- PROVIDE AND MAINTAIN SILT FENCE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MAINTENANCE INCLUDES THE REMOVAL OF BUILT-UP SEDIMENT WHEN THE SEDIMENT ACCUMULATES TO 1/3 OF THE HEIGHT OF THE SILT FENCE. REMOVE, REPLACE, RETRENCH, OR RE-BACKFILL THE SILT FENCE IF IT FAILS. REINSTALL FENCE DAMAGED BY CONSTRUCTION.
- PROVIDE AND MAINTAIN INLET FILTERS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MAINTENANCE CONSISTS OF REMOVING ALL SEDIMENT WITH A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF THE INLET FILTER IS DAMAGED, REPLACE BOTH THE STONE AND GEOTEXTILE FILTER FABRIC.
- PREPARE SEED BEDS, SEED, FERTILIZE AND MULCH IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS. INSPECT THE SEEDING AREA AFTER A VIABLE STAND OF GRASS IS PRESENT. RESEED AND REMULCH BARE AREAS.
- REPAIR ANY EXISTING IRRIGATION SYSTEM DAMAGED BY CONSTRUCTION. PAID AS "IRRIGATION LINES, REMOVE AND REPLACE".

MDEQ SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
5	Seeding	Inexpensive & very effective Stabilizes soil, thus minimizing erosion Permits runoff to infiltrate soil, reducing runoff volume Should include prepared topsoil bed
6	Seeding with Mulch and/or Matting	Facilitates establishment of vegetative cover Effective for drainageways with low velocity Easily placed in small quantities by inexperienced personnel Should include prepared topsoil bed
54	Geotextile Silt Fence	Use geotextile and posts or poles May be constructed or prepackaged Easy to construct and locate as necessary
56	Catch Basin, Filter Bag	Manufactured filter bag inserted under casting. Collects sediment at catch basin inlet.

TEMPORARY MEASURE
 PERMANENT MEASURE



**BAYBERRY DETENTION BASIN
 SESC AND DEMOLITION PLAN**
 SCALE: 1" = 10'



3 WORKING DAYS
 BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171

CITY OF WYOMING
 ENGINEERING DEPARTMENT
 DESIGN DIVISION
 WYOMING, MICHIGAN
 PLAN OF IMPROVEMENTS

IN _____ FROM _____ TO _____

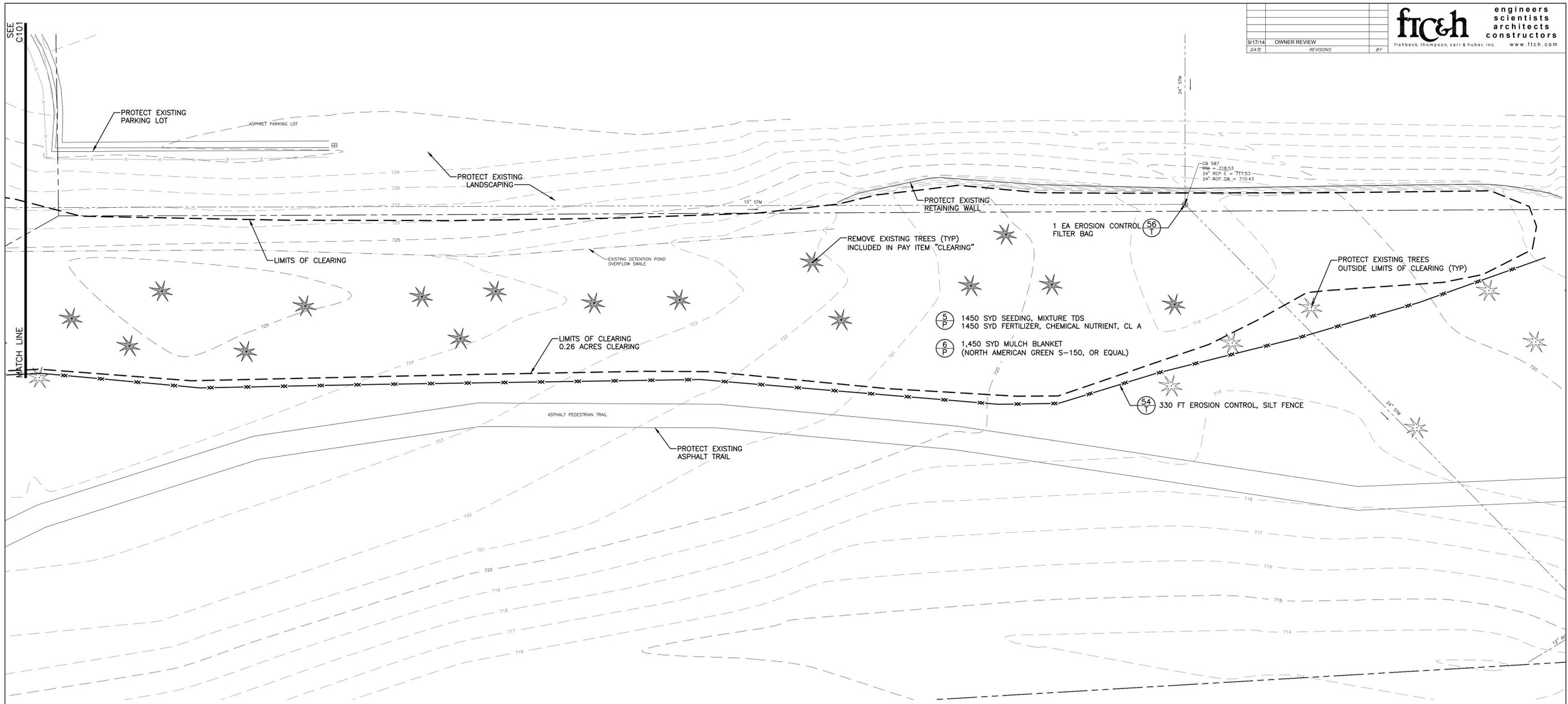
SCALE: VERT. 1" = 5'
 HORIZ. 1" = 10'

ELECTRIC	GAS	TELEPHONE	CABLE TV
----------	-----	-----------	----------

SHEET NO. _____ CITY MANAGER _____
 SYSTEM NO. _____ CITY ENGINEER _____
 SA. NO. _____ DESIGN ENGINEER _____
 DRAWN BY: FTC&H
 DESIGNED BY: NRT
 CHECKED BY: CES
 1/4 SEC. NO. 1/4 SEC. NO.
 DATE DRAWN August 6, 2014

SHEET NO. C10I

PLOT INFO: Z:\2013\130701\CAD\CDC\101130701.DWG LAYOUT: C10I DATE: 9/17/2014 TIME: 10:12:59 AM USER: NRT



NOTES

- TREES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND WERE NOT INCLUDED IN THE DESIGN SURVEY.
- PROVIDE AND MAINTAIN SILT FENCE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MAINTENANCE INCLUDES THE REMOVAL OF BUILT-UP SEDIMENT WHEN THE SEDIMENT ACCUMULATES TO 1/3 OF THE HEIGHT OF THE SILT FENCE. REMOVE, REPLACE, RETRENCH, OR RE-BACKFILL THE SILT FENCE IF IT FAILS. REINSTALL FENCE DAMAGED BY CONSTRUCTION.
- PROVIDE AND MAINTAIN INLET FILTERS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MAINTENANCE CONSISTS OF REMOVING ALL SEDIMENT WITH A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF THE INLET FILTER IS DAMAGED, REPLACE BOTH THE STONE AND GEOTEXTILE FILTER FABRIC.
- PREPARE SEED BEDS, SEED, FERTILIZE AND MULCH IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS. INSPECT THE SEEDED AREA AFTER A VIABLE STAND OF GRASS IS PRESENT. RESEED AND REMULCH BARE AREAS.
- REPAIR ANY EXISTING IRRIGATION SYSTEM DAMAGED BY CONSTRUCTION. PAID AS "IRRIGATION LINES, REMOVE AND REPLACE".

MDEQ SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
5	Seeding	Inexpensive & very effective. Stabilizes soil, thus minimizing erosion. Permits runoff to infiltrate soil, reducing runoff volume. Should include prepared topsoil bed.
6	Seeding with Mulch and/or Matting	Facilitates establishment of vegetative cover. Effective for drainages with low velocity. Easily placed in small quantities by inexperienced personnel. Should include prepared topsoil bed.
54	Geotextile Silt Fence	Use geotextile and posts or poles. May be constructed or prepackaged. Easy to construct and locate as necessary.
56	Catch Basin, Filter Bag	Manufactured filter bag inserted under casting. Collects sediment at catch basin inlet.

 TEMPORARY MEASURE
 PERMANENT MEASURE

3 WORKING DAYS
BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171

CITY OF WYOMING
 ENGINEERING DEPARTMENT
 DESIGN DIVISION
 WYOMING, MICHIGAN
 PLAN OF IMPROVEMENTS

IN _____
 FROM _____
 TO _____

SCALE: VERT. 1" = 5'
 HORIZ. 1" = 10'

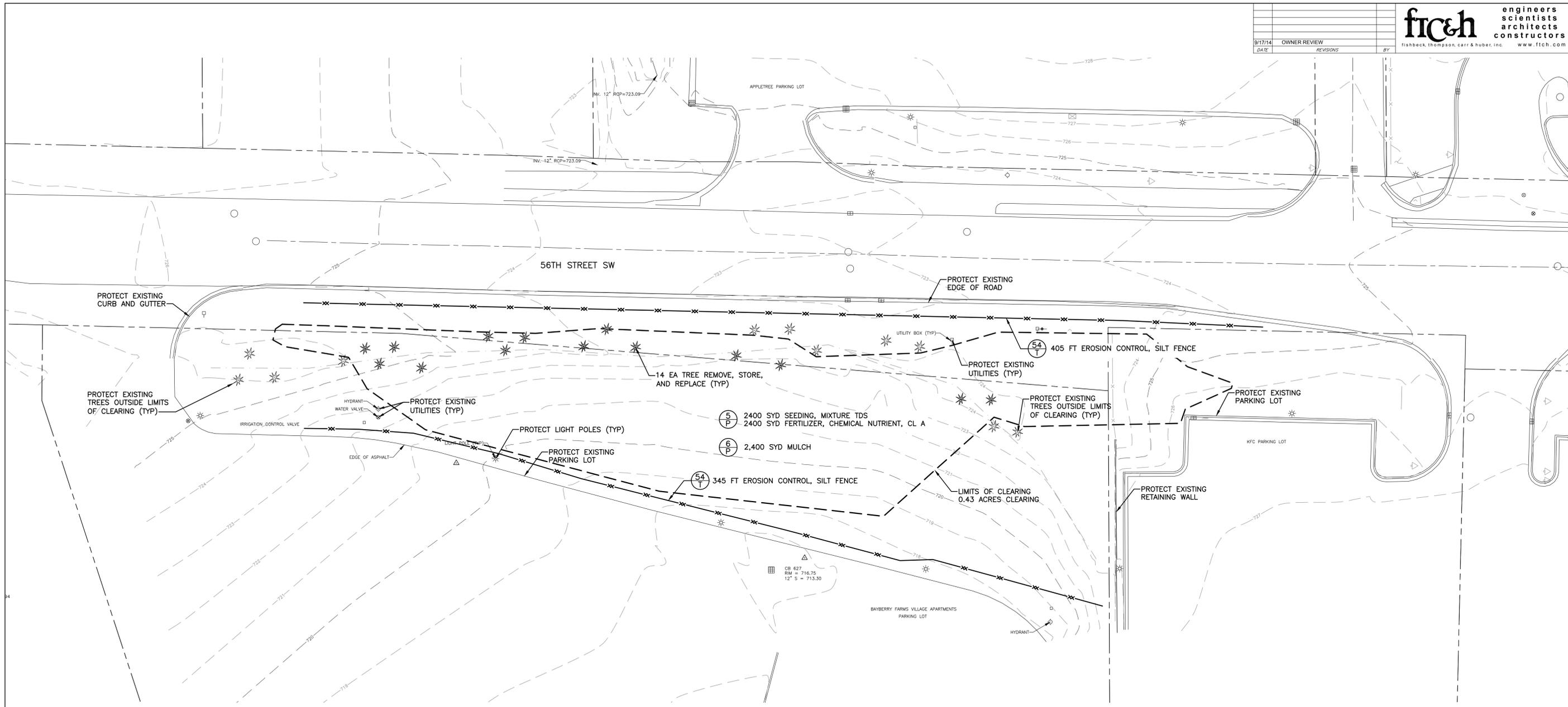
ELECTRIC	GAS	TELEPHONE	CABLE TV
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SHEET NO. _____
 SYSTEM NO. _____ CITY MANAGER
 SA. NO. _____ CITY ENGINEER
 DRAWN BY: FTC&H
 DESIGNED BY: NRT
 CHECKED BY: CES
 1/4 SEC. NO. _____
 1/4 SEC. NO. _____
 DATE DRAWN: August 6, 2014

SHEET NO. C102

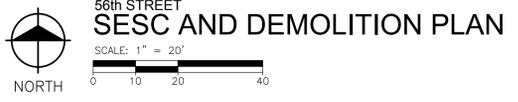
PLOT INFO: Z:\2013\30701\CAD\CDC\C102\30701.DWG LAYOUT: C102 DATE: 8/7/2014 TIME: 10:48:11 AM USER: NRT

9/17/14	OWNER REVIEW	
DATE	REVISIONS	BY



NOTES

- TREES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND WERE NOT INCLUDED IN THE DESIGN SURVEY.
- PROVIDE AND MAINTAIN SILT FENCE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MAINTENANCE INCLUDES THE REMOVAL OF BUILT-UP SEDIMENT WHEN THE SEDIMENT ACCUMULATES TO 1/3 OF THE HEIGHT OF THE SILT FENCE. REMOVE, REPLACE, RETRENCH, OR RE-BACKFILL THE SILT FENCE IF IT FAILS. REINSTALL FENCE DAMAGED BY CONSTRUCTION.
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- PREPARE SEED BEDS, SEED, FERTILIZE AND MULCH IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS. INSPECT THE SEEDED AREA AFTER A VIABLE STAND OF GRASS IS PRESENT. RESEED AND REMULCH BARE AREAS.
- REPAIR ANY EXISTING IRRIGATION SYSTEM DAMAGED BY CONSTRUCTION. PAID AS "IRRIGATION LINES, REMOVE AND REPLACE".



MDEQ SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
5	Seeding	Inexpensive & very effective. Stabilizes soil, thus minimizing erosion. Permits runoff to infiltrate soil, reducing runoff volume. Should include prepared topsoil bed.
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54	Geotextile Silt Fence	Use geotextile and posts or poles. May be constructed or prepackaged. Easy to construct and locate as necessary.
56	Catch Basin, Filter Bag	Manufactured filter bag inserted under casting. Collects sediment at catch basin inlet.

XX TEMPORARY MEASURE
YY PERMANENT MEASURE

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

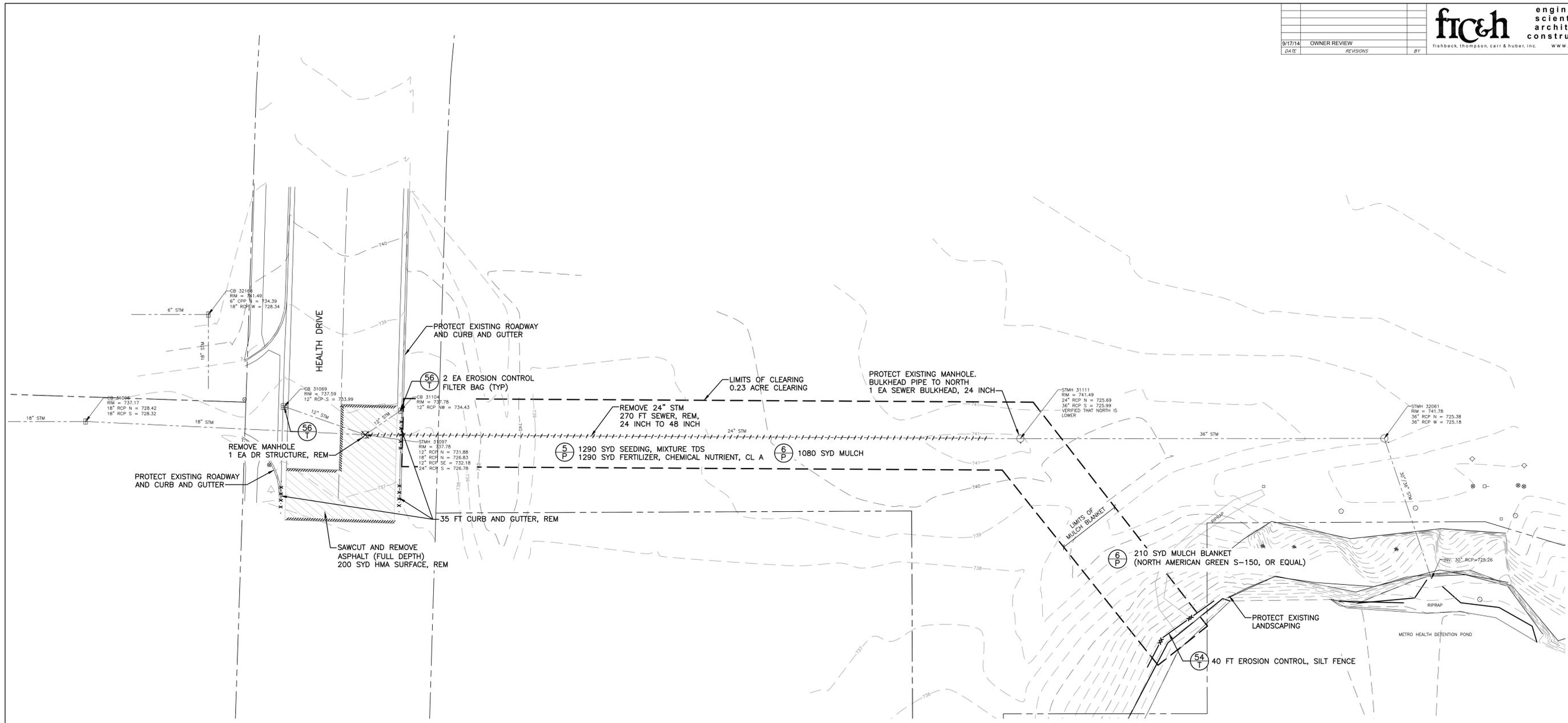
IN _____
FROM _____
TO _____

SCALE: VERT. 1" = 5'
HORIZ. 1" = 10'

SHEET NO. _____
SYSTEM NO. _____ CITY MANAGER
SA. NO. _____ CITY ENGINEER
DESIGNED BY: FTC&H
DRAWN BY: NRT
CHECKED BY: CES
1/4 SEC. NO. _____
1/4 SEC. NO. _____
DATE DRAWN: August 6, 2014

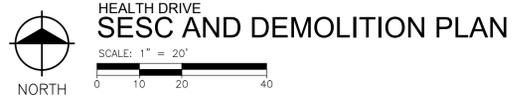
SHEET NO. C103

PLOT INFO: Z:\2013\130701\CAD\CDC\C103\30701.DWG LAYOUT: C103 DATE: 9/17/2014 TIME: 10:48:30 AM USER: NRT



NOTES

- TREES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND WERE NOT INCLUDED IN THE DESIGN SURVEY.
- PROVIDE AND MAINTAIN SILT FENCE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MAINTENANCE INCLUDES THE REMOVAL OF BUILT-UP SEDIMENT WHEN THE SEDIMENT ACCUMULATES TO 1/3 OF THE HEIGHT OF THE SILT FENCE. REMOVE, REPLACE, RETRENCH, OR RE-BACKFILL THE SILT FENCE IF IT FAILS. REINSTALL FENCE DAMAGED BY CONSTRUCTION.
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MDEQ SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
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56	Catch Basin, Filter Bag	Manufactured filter bag inserted under casting. Collects sediment at catch basin inlet.

XX TEMPORARY MEASURE
YY PERMANENT MEASURE

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

IN _____
FROM _____
TO _____

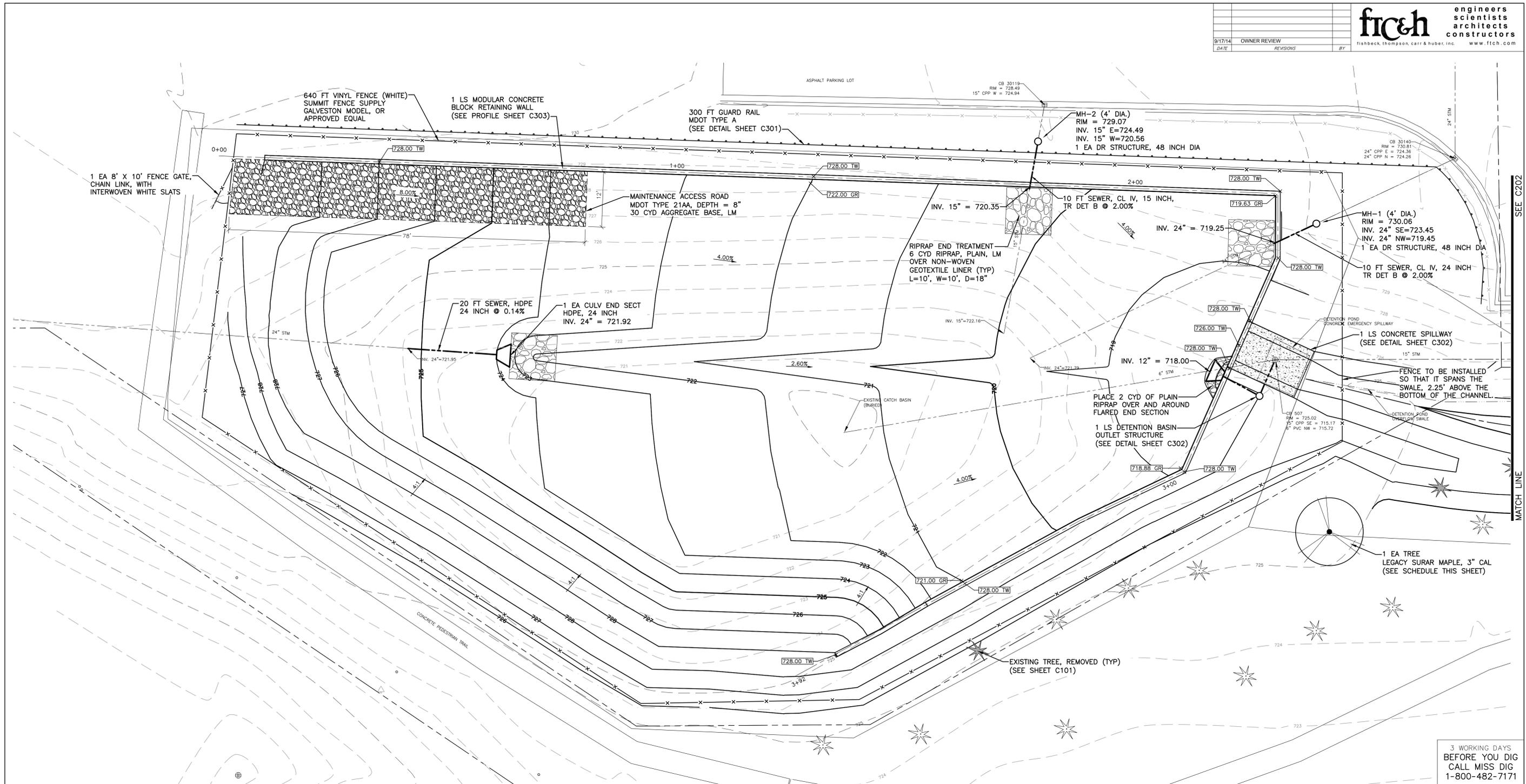
SCALE: VERT. 1" = 5'
HORIZ. 1" = 10'

ELECTRIC	GAS	TELEPHONE	CABLE TV
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SHEET NO. _____
SYSTEM NO. _____ CITY MANAGER
SA. NO. _____ CITY ENGINEER
DRAWN BY: FTC&H
DESIGNED BY: NRT
CHECKED BY: CES
DESIGN ENGINEER
1/4 SEC. NO. _____
1/4 SEC. NO. _____
DATE DRAWN: August 6, 2014

SHEET NO. C104

PLOT INFO: Z:\2013\130701\CAD\C104\DWG_LAYOUT.C104 DATE: 9/17/2014 TIME: 10:48:48 AM USER: NRT

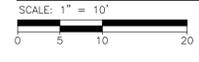


PLANT SCHEDULE

TREES	COMMON NAME / BOTANICAL NAME	CONT	CAL	QTY
	Legacy Sugar Maple / <i>Acer saccharum</i> 'Legacy'	B & B	3" Cal	1



BAYBERRY DETENTION BASIN LAYOUT



100-YEAR WATER SURFACE ELEVATION = 725.82 FEET
 100-YEAR STORAGE VOLUME = 57,561 CUBIC FEET

SPOT ELEVATION LEGEND

604.50	SPOT ELEVATION
GP	GUTTER PAN
TC	TOP OF CURB
TP	TOP OF PAVEMENT
GR	GRADE ELEVATION
TW	TOP OF WALL
EW	EDGE OF WALK
LP	LOW POINT
HP	HIGH POINT

NOTES

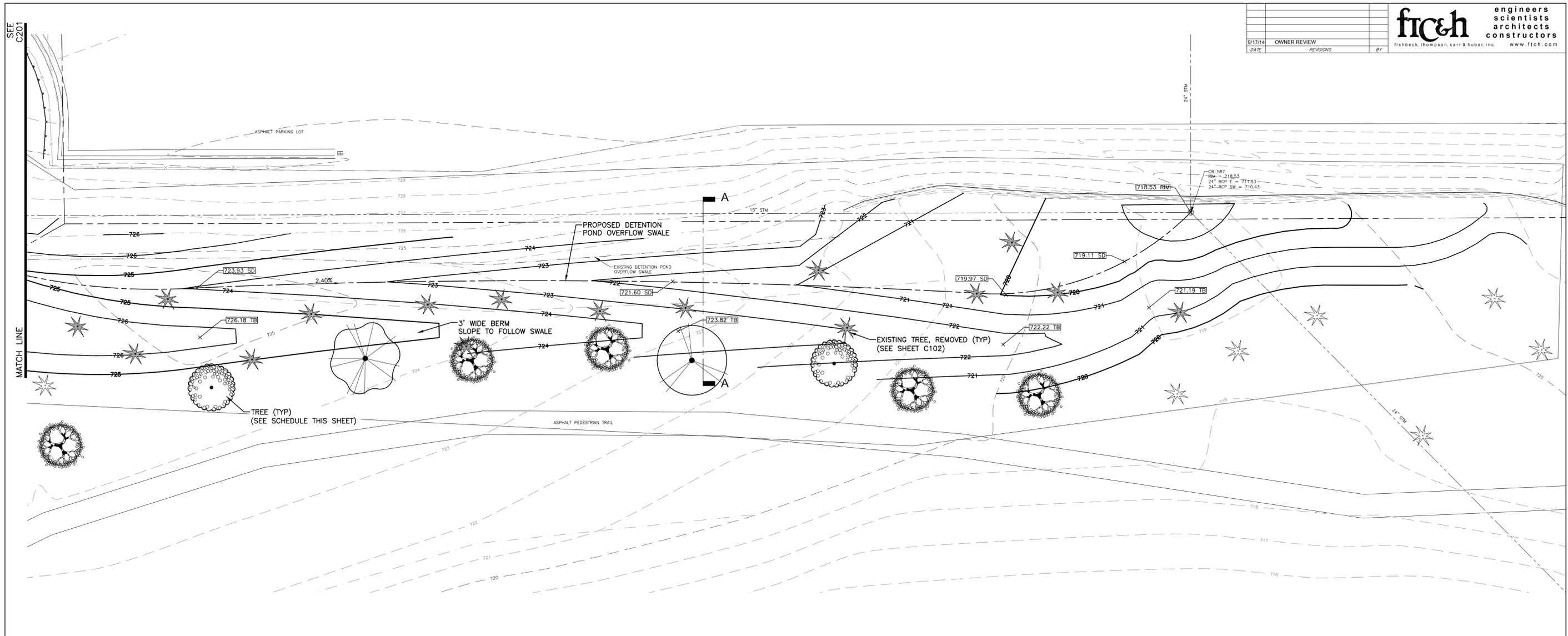
- STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION. 3,450 SYD TOPSOIL SURFACE, SALV, 4 INCH.
- GRADE SITE TO PROPOSED CONTOURS. 995 CYD EMBANKMENT, CIP 1,690 CYD EXCAVATION, EARTH IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
- GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
- GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
- REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS. INCLUDED IN COST OF "EXCAVATION, EARTH"
- FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO MATCH EDGE OF PAVEMENT.
- TREES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND WERE NOT INCLUDED IN THE DESIGN SURVEY

CITY OF WYOMING
 ENGINEERING DEPARTMENT
 DESIGN DIVISION
 WYOMING, MICHIGAN
 PLAN OF IMPROVEMENTS

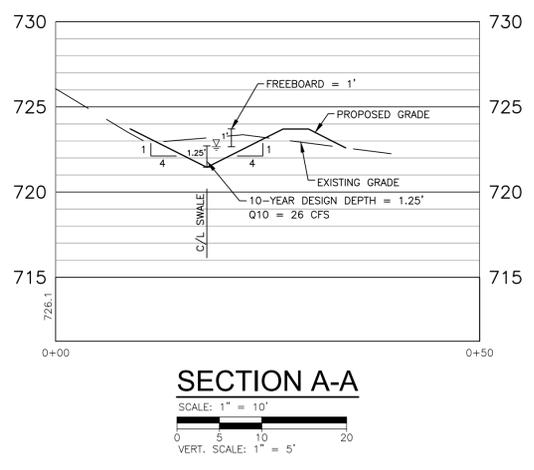
IN				
FROM				
TO				
SCALE: VERT. 1" = 5'	ELECTRIC	GAS	TELEPHONE	CABLE TV
HORIZ. 1" = 10'				
SHEET NO.				
SYSTEM NO.				CITY MANAGER
SA. NO.				
DRAWN BY: FTC&H				CITY ENGINEER
DESIGNED BY: NRT				
CHECKED BY: CES				DESIGN ENGINEER
1/4 SEC. NO.				
1/4 SEC. NO.				
DATE DRAWN				
August 6, 2014				

SHEET NO. C201

PLOT INFO: Z:\2013\130701\CAD\C201\DWG_LAYOUT.C201 DATE: 8/7/2014 TIME: 11:21:56 AM USER: NRT



DETENTION BASIN OVERFLOW SWALE LAYOUT
SCALE: 1" = 10'



PLANT SCHEDULE

TREES	COMMON NAME / BOTANICAL NAME	CONT	CAL	SIZE	QTY
	October Glory Maple / <i>Acer rubrum</i> "October Glory"™	B # B	2.5" Cal		1
	Legacy Sugar Maple / <i>Acer saccharum</i> "Legacy"	B # B	3" Cal		1
	Norway Spruce / <i>Picea abies</i>	B # B		7-9' H	5
	White Pine / <i>Pinus strobus</i>	B # B		7-9' H	2

SPOT ELEVATION LEGEND

- 604.50 SPOT ELEVATION
- SD SWALE DITCH
- TB TOP OF BERM

NOTES

1. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION. 1,450 SYD TOPSOIL SURFACE, SALV, 4 INCH.
2. GRADE SITE TO PROPOSED CONTOURS. 260 CYD EMBANKMENT, CIP 80 CYD EXCAVATION, EARTH IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
3. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
4. GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
5. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS. INCLUDED IN COST OF "EXCAVATION, EARTH"
6. FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO MATCH EDGE OF PAVEMENT.
7. TREES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND WERE NOT INCLUDED IN THE DESIGN SURVEY

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

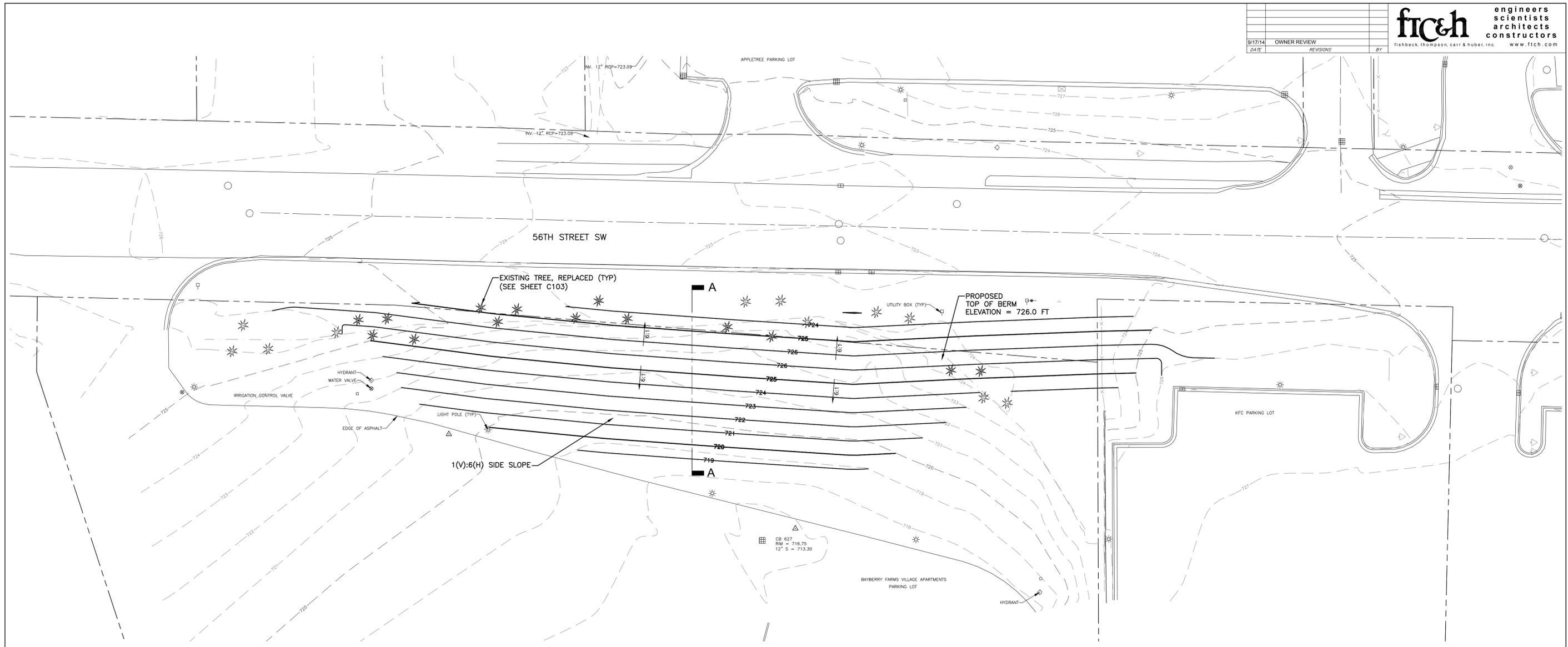
CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

IN	ELECTRIC	GAS	TELEPHONE	CABLE TV
FROM				
TO				
SCALE: VERT. 1" = 5' HORIZ. 1" = 10'				
SHEET NO.				
SYSTEM NO.				CITY MANAGER
SA. NO.				
DRAWN BY: FTC&H				CITY ENGINEER
DESIGNED BY: NRT				
CHECKED BY: CES				DESIGN ENGINEER
1/4 SEC. NO.				
DATE DRAWN				

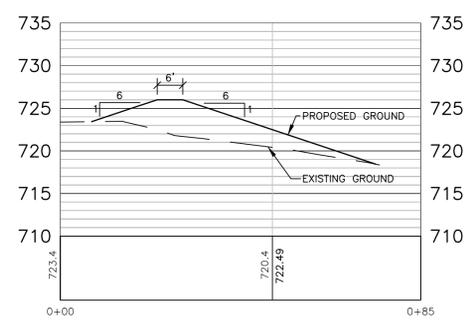
SHEET NO. C202

August 6, 2014

PLOT INFO: Z:\2013\130701\CAD\C202\20130701.DWG LAYOUT: C202 DATE: 9/17/2014 TIME: 11:27:04 AM USER: NRT



56th STREET BERM LAYOUT PLAN
SCALE: 1" = 20'
NORTH



56th STREET BERM SECTION A-A
SCALE: 1" = 20'
VERT. SCALE: 1" = 5'

NOTES

1. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION. 2,400 SYD TOPSOIL SURFACE, SALV, 4 INCH.
2. GRADE SITE TO PROPOSED CONTOURS. 1,240 CYD EMBANKMENT, CIP
3. GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.
4. GRADE AREAS AT SITE PERIMETER TO MATCH GRADES OF ADJACENT PARCELS.
5. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS. INCLUDED IN COST OF "EXCAVATION, EARTH"
6. FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO MATCH EDGE OF PAVEMENT.
7. TREES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND WERE NOT INCLUDED IN THE DESIGN SURVEY

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
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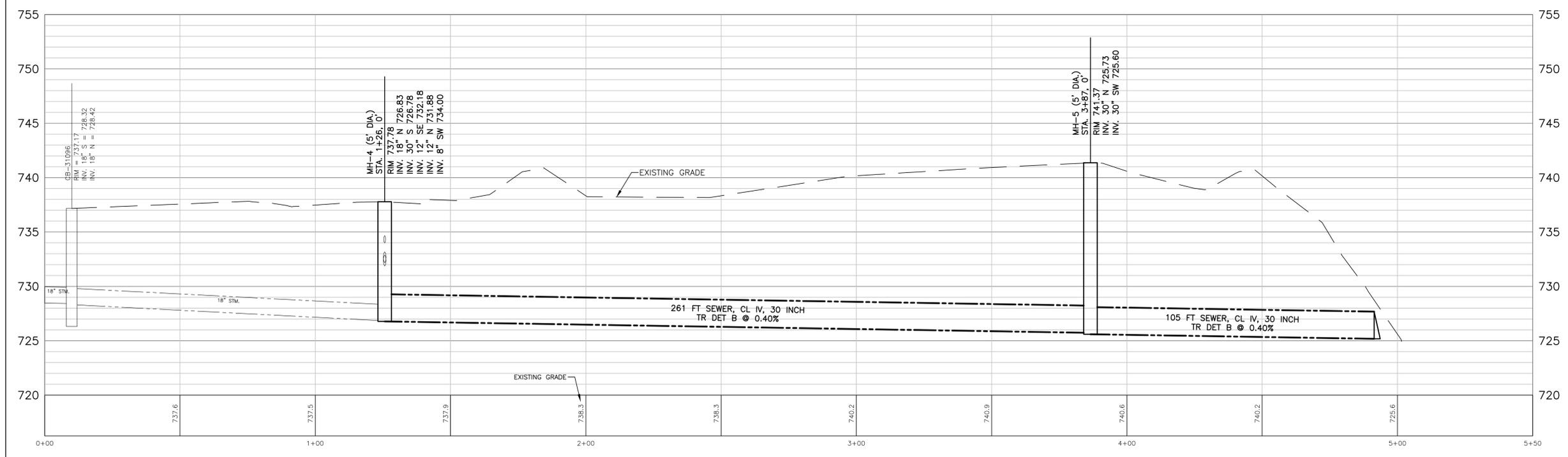
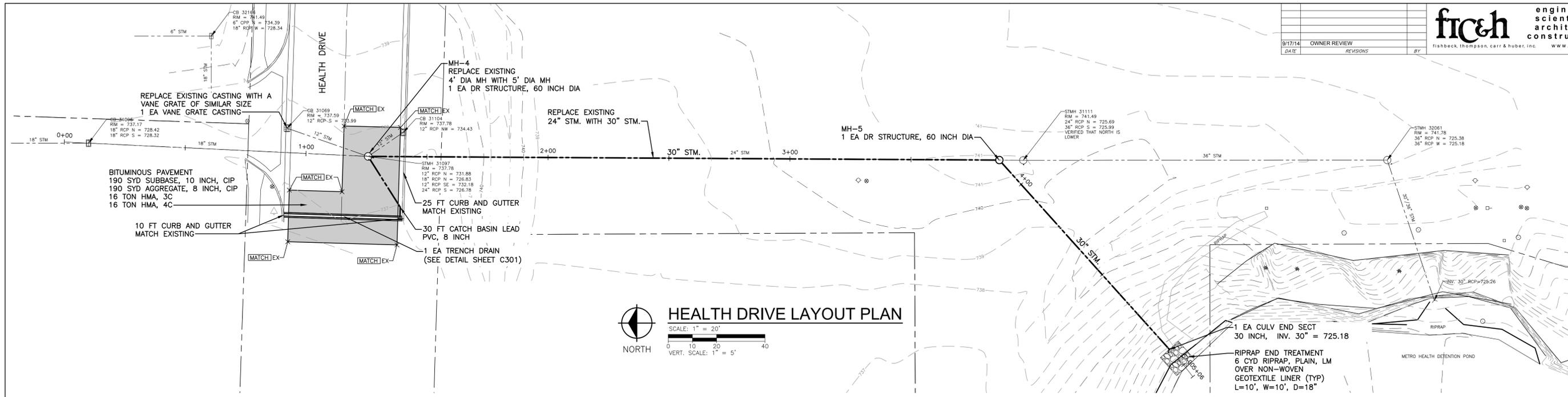
CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

IN				
FROM				
TO				
SCALE: VERT. 1" = 5'	ELECTRIC	GAS	TELEPHONE	CABLE TV
HORIZ. 1" = 20'				
SHEET NO.				
SYSTEM NO.				CITY MANAGER
SA. NO.				
DRAWN BY: FTC&H				CITY ENGINEER
DESIGNED BY: NRT				
CHECKED BY: CES				DESIGN ENGINEER
1/4 SEC. NO.				
DATE DRAWN				

August 6, 2014

SHEET NO. C203

PLOT INFO: Z:\2013\130701\CAD\C203\DWG_LAYOUT.C203 DATE: 9/17/2014 TIME: 10:16:19 AM USER: NRT



SPOT ELEVATION LEGEND

GP	SPOT ELEVATION
GP	GUTTER PAN
TC	TOP OF CURB
TP	TOP OF PAVEMENT
GR	GRADE ELEVATION
TW	TOP OF WALL
EW	EDGE OF WALK
LP	LOW POINT
HP	HIGH POINT

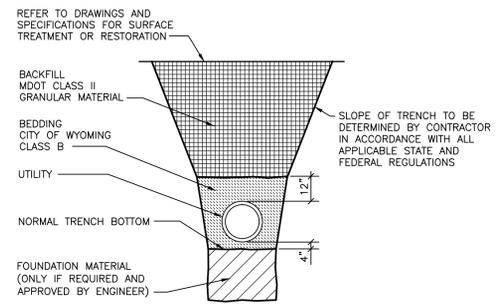
NOTES

1. STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION. INCLUDED IN COST OF UTILITY
2. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS. INCLUDED IN COST OF UTILITY.

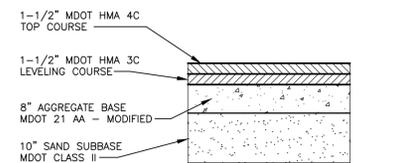
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

IN			
FROM			
TO			
SCALE: VERT. 1" = 5'	ELECTRIC	GAS	TELEPHONE
HORIZ. 1" = 20'			CABLE TV
SHEET NO.	CITY MANAGER		
SYSTEM NO.	CITY ENGINEER		
SA. NO.	DESIGN ENGINEER		
DRAWN BY: FTC&H	DESIGNED BY: NRT		
CHECKED BY: CES	DATE DRAWN: August 6, 2014		
1/4 SEC. NO.	SHEET NO. C204		
1/4 SEC. NO.			

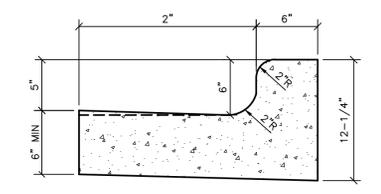


EMBEDMENT FOR CONDUITS DETAIL
NO SCALE



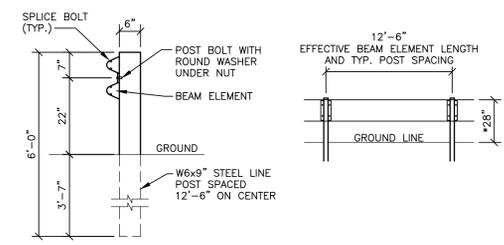
- NOTES:
1. AGGREGATE BASE AND SUBBASE SHALL BE IMPORTED MATERIAL SUBJECT TO THE APPROVAL OF AN INDEPENDENT TESTING LABORATORY.
 2. SUBMIT BITUMINOUS MIX FORMULA TO ENGINEER FOR APPROVAL PRIOR TO PAVING.
 3. FURNISH WEIGHT SLIPS FOR MATERIAL INCORPORATED IN THE PROJECT TO VERIFY THAT THE REQUIRED TONNAGE HAS BEEN APPLIED.
 4. BITUMINOUS MIXTURE TO BE IN ACCORDANCE WITH MDOT 501 AND 502. WEIGHT TO BE 110 LB/IN/SQYD.

BITUMINOUS PAVEMENT CROSS SECTION
NO SCALE

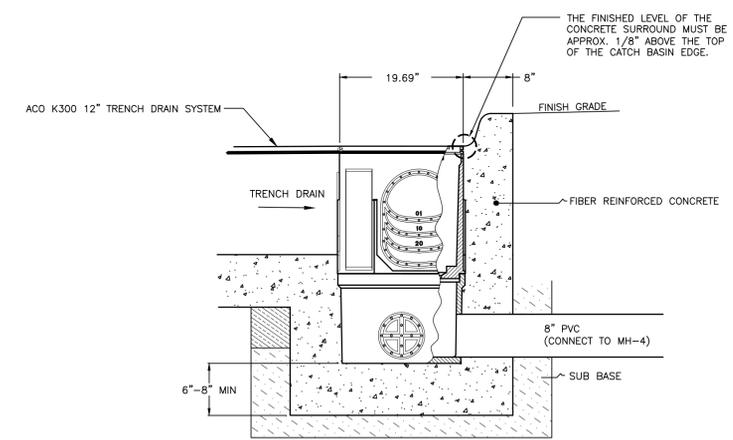


NOTE: THICKNESS OF GUTTER IS TO MATCH THICKNESS OF PAVEMENT

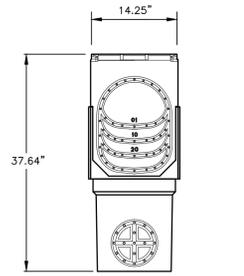
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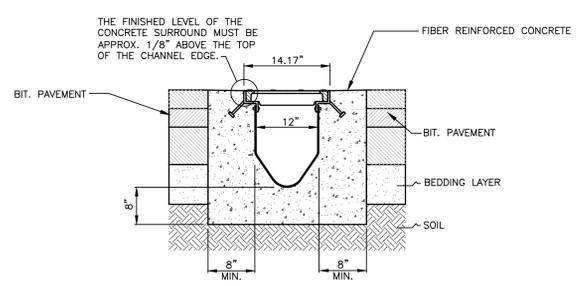
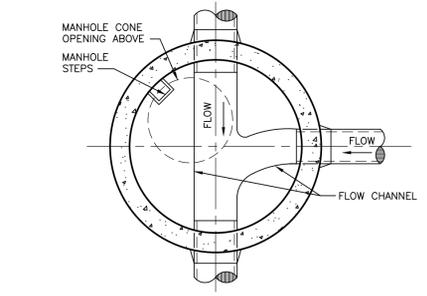
GUARDRAIL MDOT TYPE A DETAIL
NO SCALE



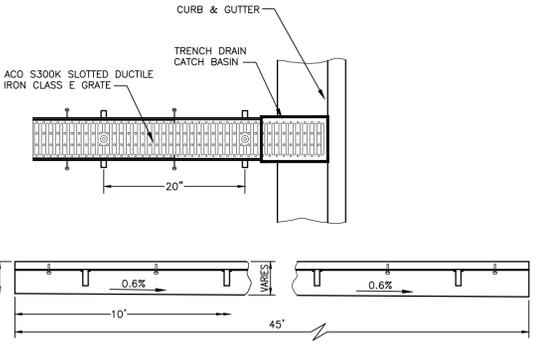
TRENCH DRAIN CATCH BASIN DETAIL
NO SCALE



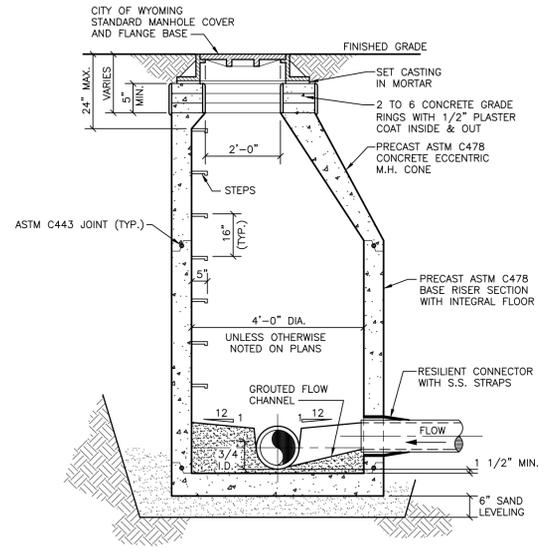
END VIEW
NO SCALE



TRENCH DRAIN DETAIL
NO SCALE



TRENCH DRAIN DETAIL
NO SCALE



STANDARD MANHOLE
NO SCALE

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

IN _____
FROM _____
TO _____

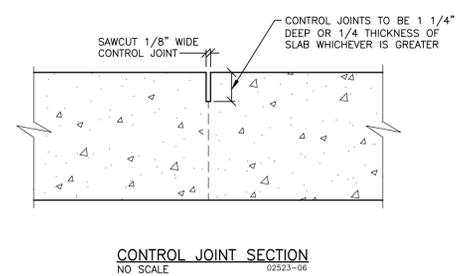
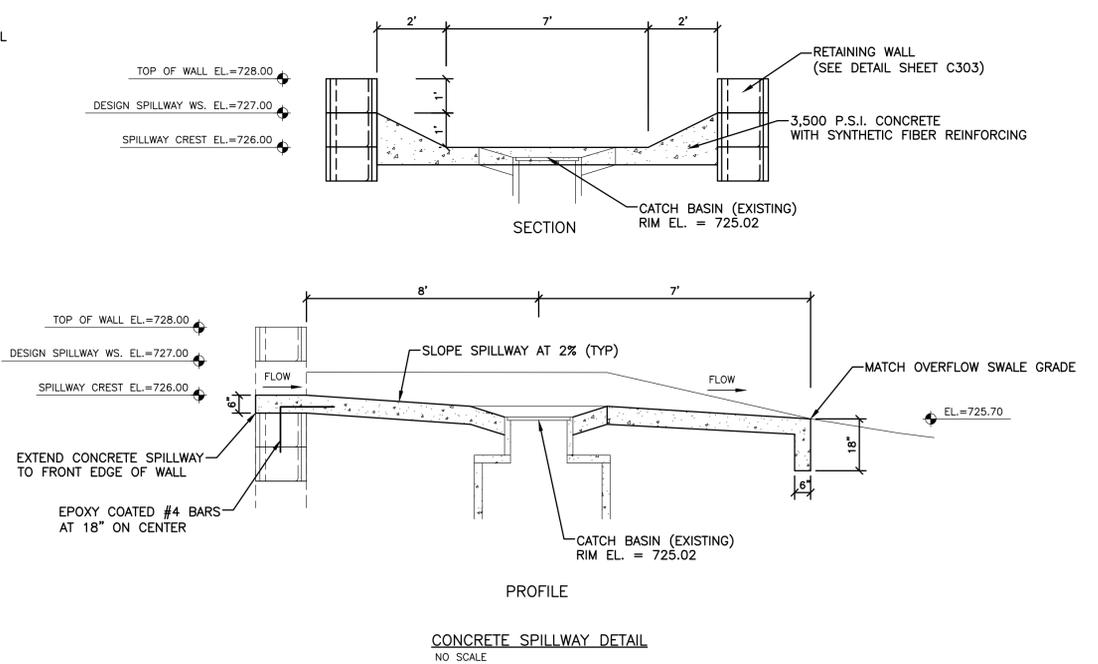
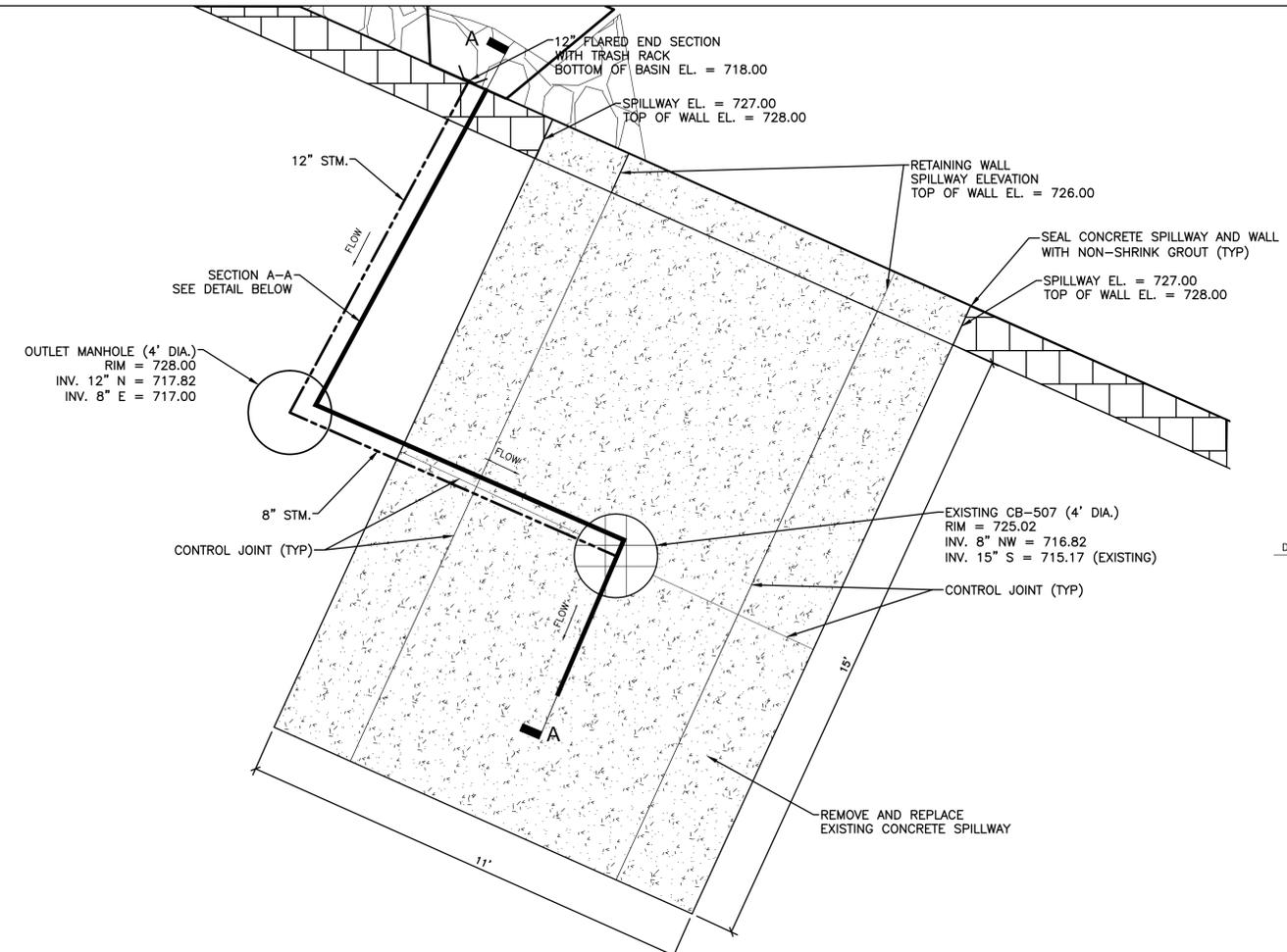
SCALE: VERT. 1" = 5'
HORIZ. 1" = 10'

ELECTRIC	GAS	TELEPHONE	CABLE TV
----------	-----	-----------	----------

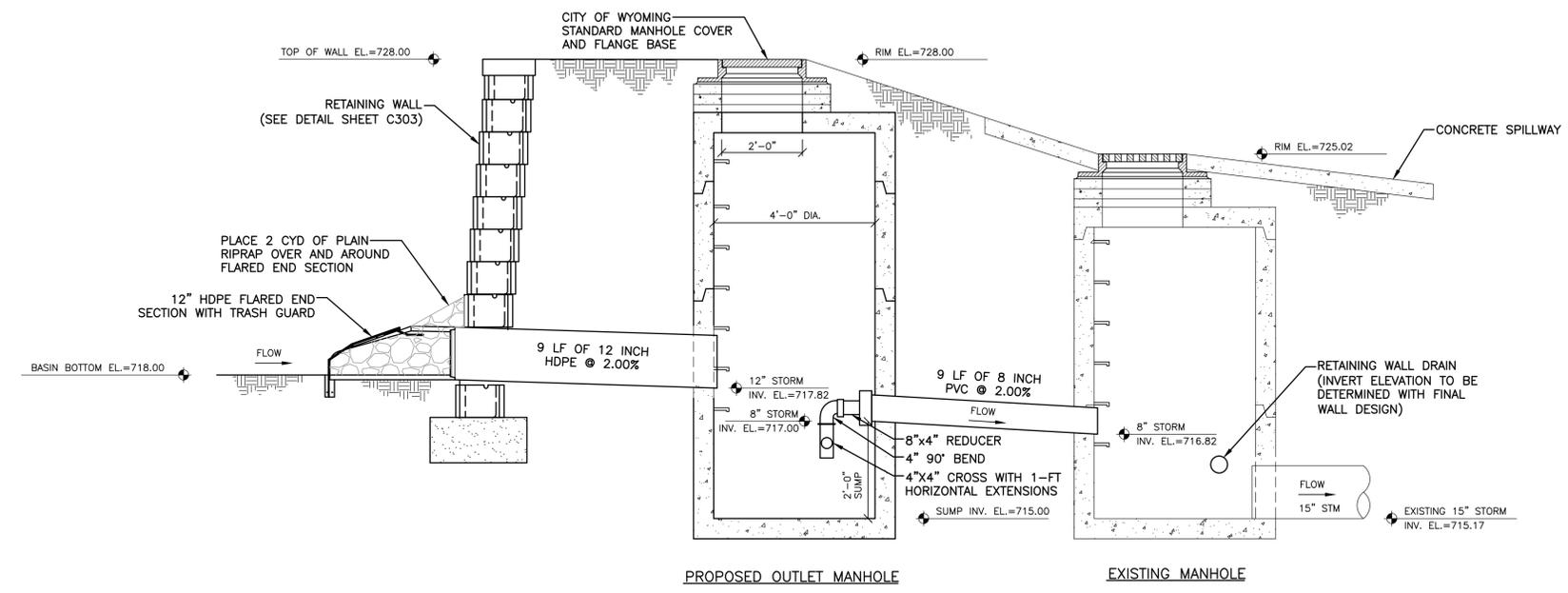
SHEET NO. _____ CITY MANAGER
SA. NO. _____ CITY ENGINEER
DESIGNED BY NRT DESIGN ENGINEER
CHECKED BY CES
1/4 SEC. NO. 1/4 SEC. NO.
DATE DRAWN August 6, 2014

SHEET NO. C301

PLOT INFO: Z:\2013\130701\CAD\C301.DWG LAYOUT: C301 DATE: 9/17/2014 TIME: 10:17:09 AM USER: NRT



OUTLET STRUCTURE
SCALE: 1" = 2'
NORTH



SECTION A-A
OUTLET STRUCTURE DETAIL (SCHEMATIC - NOT TO SCALE)
NO SCALE

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

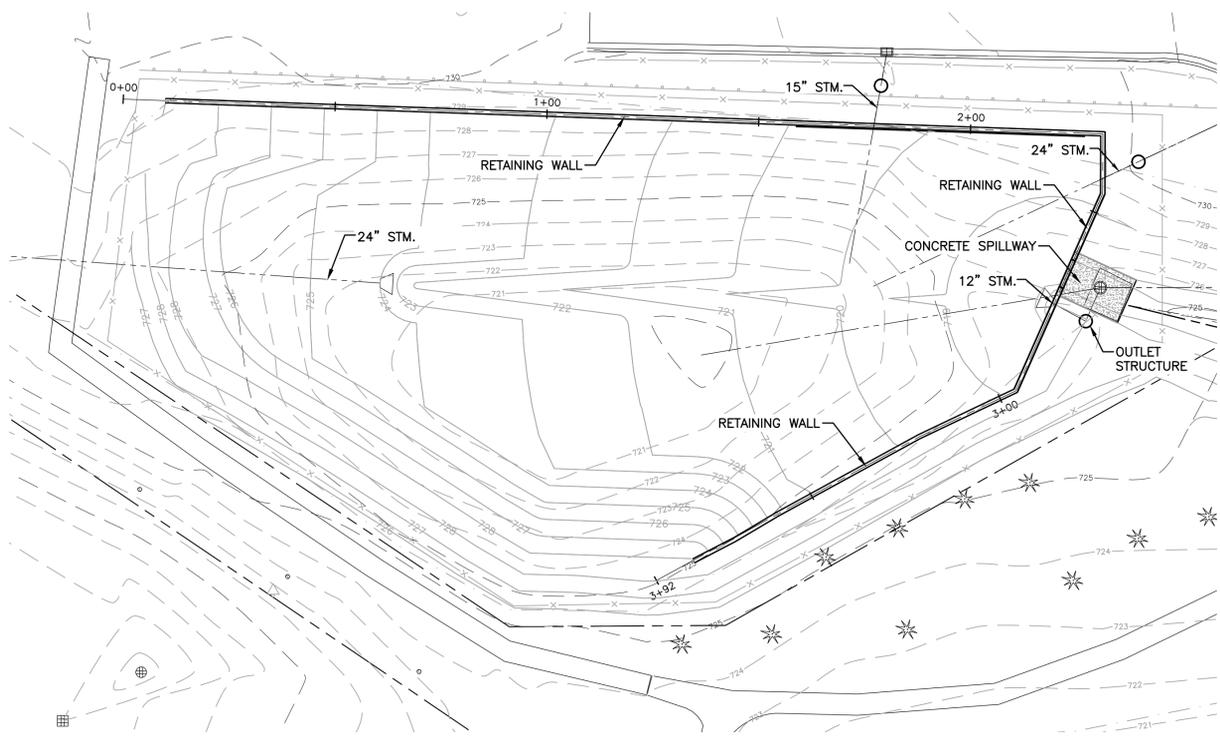
IN _____
FROM _____
TO _____

SCALE: VERT. 1" = 5'	ELECTRIC	GAS	TELEPHONE	CABLE TV
HORIZ. 1" = 10'				

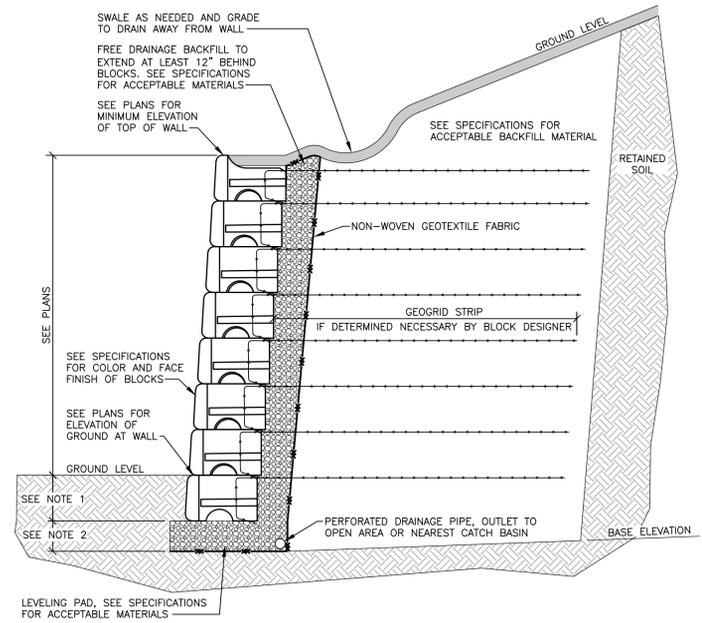
SHEET NO. _____ CITY MANAGER
SYSTEM NO. _____ CITY ENGINEER
SA. NO. _____
DRAWN BY: FTC&H
DESIGNED BY: NRT
CHECKED BY: CES
1/4 SEC. NO. 1/4 SEC. NO. _____ DESIGN ENGINEER
DATE DRAWN: August 6, 2014

SHEET NO. C302

PLOT INFO: Z:\2013\130701\CAD\C302\3021.DWG LAYOUT: C302 DATE: 9/17/2014 TIME: 10:17:42 AM USER: NRT

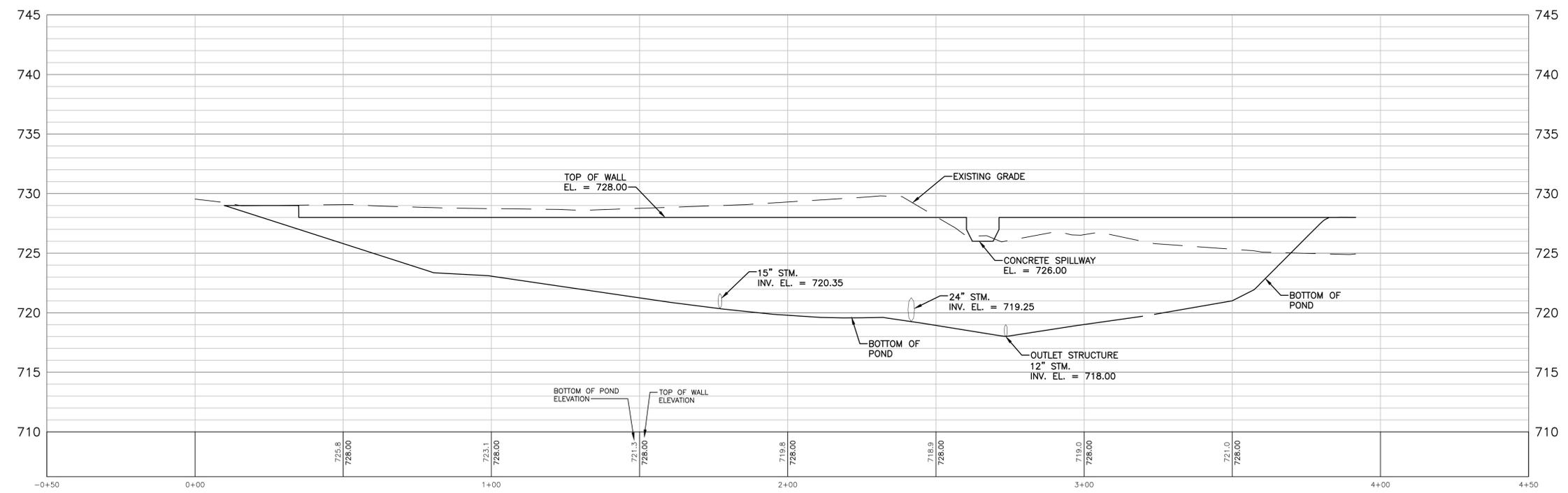


RETAINING WALL PLAN & PROFILE
SCALE: 1" = 20'
VERT. SCALE: 1" = 5'



- NOTES:**
- DEPTH OF BURY OF BLOCKS DETERMINED BY WALL DESIGNER.
 - WIDTH AND DEPTH OF LEVELING PAD DETERMINED BY WALL DESIGNER.
 - FINAL WALL DESIGN MUST ADDRESS BOTH INTERNAL AND EXTERNAL DRAINAGE AND SHALL BE EVALUATED BY THE PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE WALL DESIGN.
 - FINAL DESIGNS FOR CONSTRUCTION MUST BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER USING THE ACTUAL CONDITIONS OF THE PROPOSED SITE.
 - THE CONTRACTOR SHALL PROVIDE A WALL DESIGN CERTIFIED BY A REGISTERED ENGINEER WHO IS EMPLOYED BY THE CONTRACTOR OR MANUFACTURER. THE CONTRACTOR SHALL SUBMIT A STAMPED/SEALED WALL DESIGN TO THE ENGINEER FOR REVIEW AND APPROVAL.

MODULAR CONCRETE BLOCK RETAINING WALL DETAIL
NO SCALE



3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

CITY OF WYOMING
ENGINEERING DEPARTMENT
DESIGN DIVISION
WYOMING, MICHIGAN
PLAN OF IMPROVEMENTS

IN _____
FROM _____
TO _____

SCALE: VERT. 1" = 5'	ELECTRIC	GAS	TELEPHONE	CABLE TV
HORIZ. 1" = 10'				
SHEET NO.	CITY MANAGER			
SYSTEM NO.	CITY ENGINEER			
SA. NO.	DESIGNED BY NRT			
DRAWN BY FTC&H	DESIGN ENGINEER			
CHECKED BY CES				
1/4 SEC. NO.	August 6, 2014			
DATE DRAWN				

SHEET NO. C303

PLOT INFO: Z:\2013\130701\CAD\C303\3030701.DWG LAYOUT: C303 DATE: 9/17/2014 TIME: 10:18:19 AM USER: NRT