

#### COMMUNITY DEVELOPMENT DEPARTMENT

45175 Ten Mile Road Novi, MI 48375 (248) 347-0415 Phone (248) 735-5600 Facsimile www.cityofnovi.org

# ZONING BOARD OF APPEALS STAFF REPORT

FOR: City of Novi Zoning Board of Appeals ZONING BOARD APPEALS DATE: September 12, 2017

REGARDING: 48150 Grand River, Parcel #50-22-17-226-003 (PZ17-0041)

BY: Larry Butler, Deputy Director Community Development

#### . GENERAL INFORMATION:

#### **Applicant**

Giffles Webster

#### Variance Type

Dimensional Variance

#### **Property Characteristics**

Zoning District: Office Service Commercial

Location: East of Wixom and North of Grand River

Parcel #: 50-22-17-226-003

#### Request

The applicant is requesting a variance from the City of Novi Ordinance Sections 5.3.2 for 1 foot reduce parking length, Section 5.11.2 to extend fence into front yard, Section 3.1.22.D 15 foot reduction in rear parking setback, 20 foot minimum required. This property is zoned Office Service Commercial (OSC).

#### **II. STAFF COMMENTS:**

#### **III. RECOMMENDATION:**

The Zoning Board of Appeals may take one of the following actions:

1.	I	move	that	we	grant	the	variance	in	Case	No.	PZ17-0041,	sought	by for
											ner has sho	own prac	
	dif	fficulty re	equiring	]							·		
		٠,,					ner will be un e		,	•	nted or limite 	d with res	pect
		(b) The	e prope	erty is u	ınique b	ecaus	se				·		
		(c) Pe	titioner	did no	ot create	e the c	condition be	caus	se				

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		(e)	The	relie		cons	istent	t wit	h th	e sp		nd	inter	nt o	f the		rdinar	nce I	oeca	ause
		(f)	The	variar	nce g	ırante	ed is s	subje	ct to:											
				1																
				2																
				4																
2.	I	mov	/e	that	we	<u>de</u>	<u>eny</u>	the	vari	iance	e in	С	ase	No	. P2	Z17-0	0041,	sou	ght	by
	for_		al di	fficult	y req	uiring						_ b	ecau	ise	Petiti	oner	 has	not	sh	own 
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			exist	gene	erally	throu	ighou	ıt the	City.											
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				_							istent			•	and	inte	nt of	the or	dina	nce
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Should you have any further questions with regards to the matter please feel free to contact me at (248) 347-0417.

Larry Butler Deputy Director Community Development City of Novi



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# ZONING BOARD OF APPEALS APPLICATION

#### APPLICATION MUST BE FILLED OUT COMPLETELY

I. PROPERTY INFORMATION (Add	Application Fee: 🌡	300		
PROJECT NAME / SUBDIVISION Oakland County Security Upgrades			Application Fee: \$\frac{\pi}{\pi}\$ Meeting Date: \$\frac{\pi}{2}\$  ZBA Case #: PZ \$\frac{1}{2}\$	- 1 1 4
ADDRESS	LOT/SIUTE/SPACE #	Meeting Date: 💆	eptember 12	
48150 Grand River Avenue		N/A		7 . 00.11
SIDWELL #	obtain from Assessing nent (248) 347-0485	ZBA Case #: PZ <u>I</u>	7-0041	
CROSS ROADS OF PROPERTY North of Grand River, West at Back He.				
IS THE PROPERTY WITHIN A HOMEOWNER'S AS	SOCIATION JURISDICTION?	REQUEST IS FOR:		
☐ YES 🗹 NO		RESIDENTIAL COM	MERCIAL   VACANT PE	roperty 🗌 signage
DOES YOUR APPEAL RESULT FROM A NO	TICE OF VIOLATION OR	CITATION ISSUED?	s 🗹 no	
II. APPLICANT INFORMATION	TELLAN APPRESS	XXX XII, UK TE, TEIT		
A. APPLICANT	EMAIL ADDRESS apontone@giffelswebster.c	om	CELL PHONE NO. N/A	
NAME	apontone@ginelawebster.e	OIII	TELEPHONE NO.	
Anthony Pontone			(313) 962-4442	
ORGANIZATION/COMPANY			FAX NO.	
Giffels Webster ADDRESS		CITY	(313) 962-5068 STATE	ZIP CODE
28 W. Adams Street, Suite 1200		Detroit	MI	48226
B. PROPERTY OWNER CHECK H	HERE IF APPLICANT IS ALS	O THE PROPERTY OWNER		
Identify the person or organization that			CELL PHONE NO	
owns the subject property:	jbridges@thomasduke.c	om	313-433-2611	
Thomas Duke Company, As Mgino A	trante		TELEPHONE NO. 248-476-3700	
ORGANIZATION/COMPANY			FAX NO.	
Novi Investment Partners, LLC				
ADDRESS 232 Summit Avenue, Suite 103		CITY Brookline	STATE MA	ZIP CODE 02446
III. ZONING INFORMATION	NA . E E. L. S			02440
A. ZONING DISTRICT				
□ R-A □ R-1 □ R-2	□ R-3 □ R-4	□ RM-1 □ RM-2	□мн	
□ I-1 □ I-2 □ RC				
B. VARIANCE REQUESTED		LI OTHER	-	
INDICATE ORDINANCE SECTION (S) AND	VARIANCE REQUESTED			
E 2 2	Variance requested	Reduce parking space length from 19'	to 18' and reduce maneuvering las	ne from 24' to 22' Not
E 11 0 o	Variance requested	Extend fence into front and	exterior side yard	0.
2 1 22 D	Variance requested	15' reduction in rear parking	setback	
Con 11 1/2(a)	Variance requested	Increase maximum slope to	1:1/ Boulder retaining w	not through
IV. FEES AND DRAWNINGS	REGISTER BUT LOS DA	The Real Property Control		our dept.
A. FEES				INCHES AND A STATE OF THE
☐ Single Family Residential (Existin	a) \$200 🗆 (With Viole	ation) \$250 🗆 Single Fami	ilv Residential (New) \$	250
✓ Multiple/Commercial/Industrial	_	ation) \$400 $\square$ Signs \$300		
				400
House Moves \$300  B. DRAWINGS 1-COPY & 1 DIG	□ Special M	eetings (At discretion of Bo	para) \$600	
<ul><li>Dimensioned Drawings and Plans</li><li>Site/Plot Plan</li></ul>		<ul><li>Existing &amp; proposed</li><li>Location of existing</li></ul>	& proposed signs, if a	
<ul> <li>Existing or proposed buildings or c</li> <li>Number &amp; location of all on-site p</li> </ul>				riance application



#### **ZONING BOARD OF APPEALS APPLICATION**

V. VARIANCE
A. VARIANCE (S) REQUESTED
☑ dimensional ☐ use ☐ sign
There is a five-(5) hold period before work/action can be taken on variance approvals.
B. SIGN CASES (ONLY) Your signature on this application indicates that you agree to install a Mock-Up Sign ten-(10) days before the schedule ZBA meeting. Failure to install a mock-up sign may result in your case not being heard by the Board, postponed to the next schedule ZBA meeting, or cancelled. A mock-up sign is NOT to be actual sign. Upon approval, the mock-up sign must be removed within five-(5) days of the meeting. If the case is denied, the applicant is responsible for all costs involved in the removal of the mock-up or actual sign (if erected under violation) within five-(5) days of the meeting.
C. ORDINANCE
City of Novi Ordinance, Section 3107 – Miscellaneous
No order of the Board permitting the erection of a building shall be valid for a period longer than one-(1) year, unless a building permit for such erection or alteration is obtained within such period and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.
No order of the Board permitting a use of a building or premises shall be valid for a period longer than one-hundred and eighty-(180) days unless such use is establish within such a period; provided, however, where such use permitted is dependent upon the erection or alteration or a building such order shall continue in force and effect if a building permit for such erection or alteration is obtained within one-(1) year and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.
D. APPEAL THE DETERMINATION OF THE BUILDING OFFICIAL
PLEASE TAKE NOTICE:
The undersigned hereby appeals the determination of the Building Official / Inspector or Ordinance made  CONSTRUCT NEW HOME/BUILDING  ADDITION TO EXISTING HOME/BUILDING  SIGNAGE
□ ACCESSORY BUILDING □ USE □ OTHER Dimensional Variance (Planning) - Zoning Ordinance
VI. APPLICANT & PROPERTY SIGNATURES
A. APPLICANT  Applicant Signature  Date
B. PROPERTY OWNER  If the applicant is not the owner, the property owner must read and sign below:
The undersigned affirms and acknowledges that he, she or they are the owner(s) of the property described in this
application and is/are aware of the contents of this application and related enclosures.
Property/Owner Signature Date
VIII FOR OFFICIAL USE ONLY
DECISION ON APPEAL:  GRANTED  DENIED  The Building Inspector is hereby directed to issue a permit to the Applicant upon the following and conditions:
Chairperson, Zoning Board of Appeals  Date



#### **Community Development Department**

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# REVIEW STANDARDS DIMENSIONAL VARIANCE

The Zoning Board of Appeals (ZBA) will review the application package and determine if the proposed Dimensional Variance meets the required standards for approval. In the space below, and on additional paper if necessary, explain how the proposed project meets each of the following standards. (Increased costs associated with complying with the Zoning Ordinance will not be considered a basis for granting a Dimensional Variance.)

#### Standard #1. Circumstances or Physical Conditions.

Explain the circumstances or physical conditions that apply to the property that do not apply generally to other properties in the same zoning district or in the general vicinity. Circumstances or physical conditions may include:

a	Shape of Lot. Exceptional narrowness, shallowness or shape of a specific property in existence on the effective date of the Zoning Ordinance or amendment. □ Not Applicable
i)	and/or
b	Environmental Conditions. Exceptional topographic or environmental conditions or other extraordinary situations on the land, building or structure.  ☐ Not Applicable ☑ Applicable ☐ If applicable, describe below:  The embankment along the proposed north parking spaces is currently sloped to a 1:1 ratio. Upon suggestion of the City reviewer, a boulder retaining wall may be placed rather than the sloped embankment. The embankment is needed the drop in elevation from the building to the property line is five (5) feet. To accommodate parking to an ADA standard, this area was raised and has created the steep slope beyond the proposed spaces. To avoid the elimination of trees on a neighboring property, it was proposed to have the steep embankment or a boulder retaining wall.
	and/or
C	Abutting Property. The use or development of the property immediately adjacent to the subject property would prohibit the literal enforcement of the requirements of the Zoning Ordinance or would involve significant practical difficulties.  Not Applicable  Applicable  If applicable, describe below:  The adjacent parcel, which borders the subject property to both the north and east, is already fully developed. The area directly to the north (on the abutting parcel) of the proposed project site has a retention pond. The presence of this feature makes it
	extremely unlikely that any more development is possible on the abutting portion adjacent parcel.
	examining animally and any more development to possible on the abatting portion adjacent parcel.

#### Standard #2. Not Self-Created.

Describe the immediate practical difficulty causing the need for the Dimensional Variance, that the need for the requested variance is not the result of actions of the property owner or previous property owners (i.e., is not self-created).

(ALL) The practical difficulty arises out of the need to provide secure employee parking that is separate from a large visitor parking lot. This is not a common design standard needed for Office Service Commercial type uses, and is typically provided for on an as-needed basis. The developer built in accordance with the OSC zoning guidelines at the time (1990's) and even included extra parking. Because the site and building were not originally designed to be a courthouse (though its is a by right use in the OSC district), the realization for this need came after the building was occupied by the tenant for several years. Additionally, the previous owners and developers did not create the topographic conditions that now require a retaining wall design variance.

#### Standard #3. Strict Compliance.

Explain how the Dimensional Variance in strict compliance with regulations governing area, setback, frontage, height, bulk, density or other dimensional requirements will unreasonably prevent the property owner from using the property for a permitted purpose, or will render conformity with those regulations unnecessarily burdensome.

Strict compliance with the zoning ordinance for the proposed project would severely impact its functionality by failing to provide a safe work environment for the employees working there. The court has been a tenant at this location for several years, and over time it has been determined that this modification is essential to site security. Strict compliance with the dimensional standards in the zoning ordinance may prevent the property from being used for a permitted purpose, and conformity with the ordinance would be impractical and unnecessarily burdensome.

#### Standard #4. Minimum Variance Necessary.

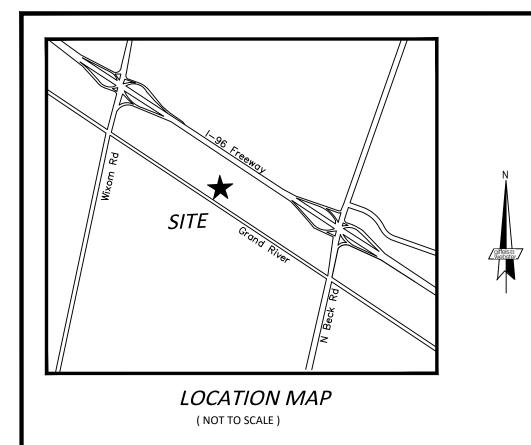
Explain how the Dimensional Variance requested is the minimum variance necessary to do substantial justice to the applicant as well as to other property owners in the district.

(1-3) The parking space space dimensions and maneuvering lane size would match existing conditions that have proven sufficient over time. These variance requests are consistent with the minimum amount necessary to fit harmoniously into the current development and cause the least impact to the adjacent parcel.

## Standard #5. Adverse Impact on Surrounding Area.

Explain how the Dimensional Variance will not cause an adverse impact on surrounding property, property values, or the use and enjoyment of property in the neighborhood or zoning district.

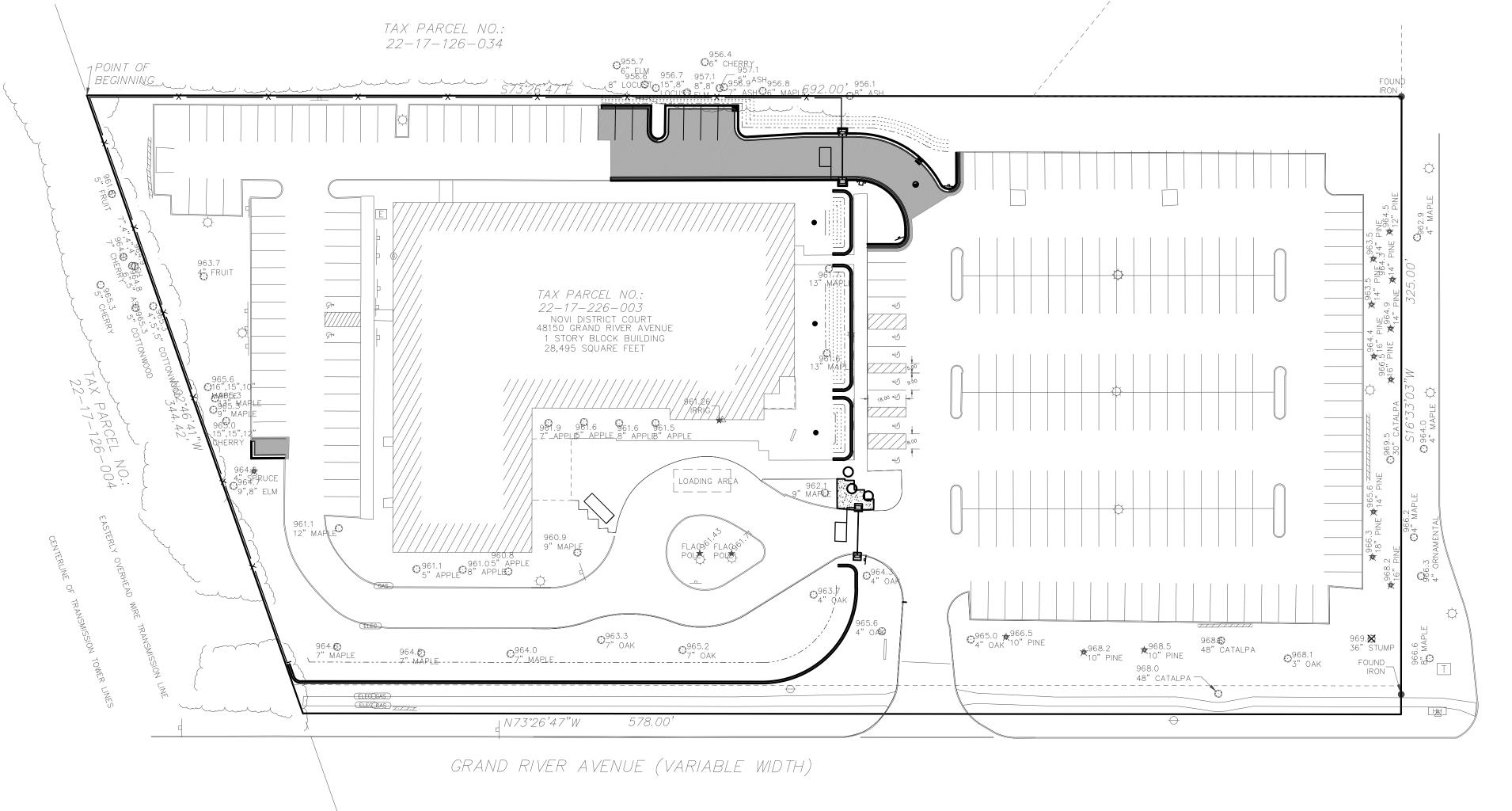
(1) As mentioned in 1.c., the area directly to the north of the project site on the abutting parcel is unlikely to be developed. There is a drainage/retention pond located there and is needed to service storm water runoff from the eastern portion of the adjacent parcel, as well as the project site via a drainage easement. Adding this drive extension and additional parking spaces will have no long-term adverse impact on the surrounding area, as any trees damaged or removed will be compensated for via an agreement with the property owner prior to construction, and the drainage easement will be updated to accommodate any additional runoff generated by the project.



# 52-1 DISTRICT COURT

48150 GRAND RIVER AVEUNE CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

# ZONING BOARD OF APPEALS PLAN



## PROPERTY OWNER

NOVI INVESTMENT PARTNERS, LLC 232 SUMMIT AVENUE, SUITE 103 BROOKLINE, MA 02446

## CLIENT

OAKLAND COUNTY FACILITIES MANAGEMENT PLANNING & ENGINEERING ONE PUBLIC WORKS DRIVE - 95 WEST WATERFORD, MI 48328-0409 (248) 585-0144

## **ENGINEER/LANDSCAPE ARCHITECT**

GIFFELS WEBSTER 28 W. ADAMS ST., SUITE 1200 DETROIT, MI 48226 (313) 962-4442

## SHEET INDEX

C000.0 COVER SHEET
C100.1 NOTES & LEGEND
C250.1 EXISTING CONDITIONS
C350.1 DEMOLITION PLAN
C550.1 SITE PLAN

C550.1 SITE PLAN C551.1 GRADING PLAN

C650.1 UTILITY PLAN
C651.1 STORM WATER MANAGEMENT PLAN

2800.7 DETAILS 2800.8 DETAILS 2800.9 DETAILS 2800.10 DETAILS

SD-5 CITY OF NOVI STORM DETAILS

550.1 LANDSCAPE PLAN

\*FOR LEGEND, PLEASE SEE SHEET C100.1

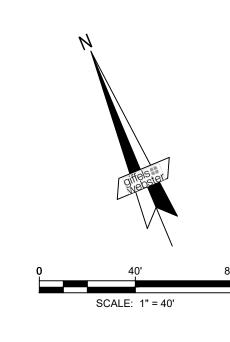
## PROPERTY DESCRIPTION

(PER WARRANTY DEED AS RECORDED IN LIBER 36599, PAGE 217, OAKLAND COUNTY RECORDS.)

A PARCEL OF LAND SITUATED IN THE NORTHEAST 1/4 OF SECTION 17, TOWN 1 NORTH, RANGE 8 EAST, OAKLAND COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 17 AND PROCEEDING ALONG THE NORTH AND SOUTH 1/4 LINE OF SAID SECTION 17, SOUTH 02 DEGREES 46 MINUTES 41 SECONDS EAST 382.13 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 73 DEGREES 26 MINUTES 47 SECONDS EAST 692.00 FEET; THENCE SOUTH 16 DEGREES 33 MINUTES 03 SECONDS WEST 325.00 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF GRAND RIVER AVENUE (100 FEET WIDE); THENCE ALONG SAID NORTHERLY RIGHT OF WAY LINE NORTH 73 DEGREES 26 MINUTES 47 SECONDS WEST 578.00 FEET TO A POINT ON THE NORTH AND SOUTH 1/4 LINE OF SAID SECTION 17; THENCE ALONG THE NORTH AND SOUTH 1/4 LINE OF SAID SECTION 17, NORTH 02 DEGREES 46 MINUTES 41 SECONDS WEST 344.42 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH A WATER RETENTION EASEMENT MORE PARTICULARLY DESCRIBED IN A WATER RETENTION AGREEMENT RECORDED IN LIBER 14917, PAGE 754, OAKLAND COUNTY RECORDS.

TAX PARCEL NO.: 22-17-226-003 COMMON ADDRESS: 48150 GRAND RIVER AVENUE, NOVI, MI 48374





Engineers Surveyors Planners

Landscape Architects

28 West Adams Road

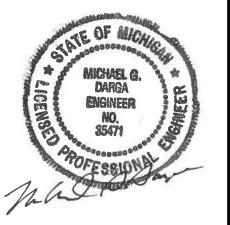
Suite 1200 Detroit, MI 48226 p (313) 962-4442

f (313) 962-5068

www.giffelswebster.com

Executive:	STC
Manager:	MGD
Designer:	AFP
Quality Control:	STC
Continu	17

T-01-N R-08-E



PRELIMINARY

Know what's below.
Call before you dig.

DATE.	1330L.
05.12.2017	Owner Review
05.18.2017	Permits
07.07.2017	Site Plan Review
08.04.2017	ZBA Submittal

veloped For:

Oakland County Facilities

Management
Planning & Engineering
One Public Works Drive - 95 West
Public Works Building
Waterford, MI 48328-0409

P 248.585.0144

Phase IV Novi District Court Cover

Oakland County Security Study

City of Novi Oakland County Michigan

Date:	05.08.2017
Scale:	1"=40'
Sheet:	C000.0
Proiect:	18833.60

## **GENERAL NOTES**

- . ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT STANDARDS. SPECIFICATIONS AND GENERAL CONDITIONS OF THE CITY OF NOVI. AND ANY/OR OTHER AGENCIES HAVING JURISDICTION.
- 2. UTILITY INFORMATION SHOWN ON THESE PLANS WAS OBTAINED FROM UTILITY OWNERS AND THEREFORE MAY NOT BE ACCURATE OR COMPLETE. THE CONTRACTOR SHALL VERIFY AND OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES WHICH MIGHT HAVE AN IMPACT ON THIS PROJECT, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES WHETHER THEY ARE SHOWN OR NOT ON THE PLANS.
- 3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AT PROPOSED CONNECTIONS AND/OR CROSSINGS, AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES TO THESE PLANS.
- 4. 72 HOURS PRIOR TO EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG AT (800) 482-7171 FOR THE LOCATION OF UNDERGROUND GAS AND CABLE FACILITIES. AND SHALL ALSO NOTIFY REPRESENTATIVES OF OTHER UTILITIES LOCATED IN THE VICINITY OF THE WORK.
- 5. ALL PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR. ALL PERMIT FEES, BONDS, AND INSURANCE REQUIRED BY THE ISSUING AGENCIES SHALL BE PROVIDED BY THE CONTRACTOR, AND MUST BE KEPT CURRENT. THE CONTRACTOR IS RESPONSIBLE FOR ALL OTHER FEES, INSPECTION COSTS, ETC., AND SHALL ADHERE TO ALL REQUIREMENTS SET FORTH
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL WORK AREAS TO ENSURE THE SAFETY OF ALL OCCUPANTS, VISITORS, PEDESTRIANS, WORKERS, ETC. THE CONTRACTOR SHALL REPAIR AND MAINTAIN ALL CONSTRUCTION FENCING AS NECESSARY.
- 7. THE CONTRACTOR SHALL PROVIDE FOR CONTROLLED ACCESS TO THE SITE FOR USE BY THE VARIOUS WORK FORCES, EMERGENCY VEHICLES, OCCUPANTS, VISITORS, ETC. THROUGHOUT CONSTRUCTION. THIS ACCESS MUST PROVIDE FOR THE REMOVAL OF MUD FROM VEHICLES TIRES. ROADWAYS AND DRIVEWAYS SHALL BE MAINTAINED OPEN FOR EMERGENCY VEHICLES AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENTS AND BUISNESSES WHOSE DRIVEWAYS ARE AFFECTED BY HIS SCHEDULE 24 HOURS IN ADVANCE. CONTRACTOR SHALL SCHEDULE CONSTRUCTION AT NON-PEAK USE HOURS AND SHALL MINIMIZE DRIVEWAY CLOSURE BY EXPEDITING CONSTRUCTION. 8. THE CONTRACTOR SHALL PROVIDE NECESSARY SIGNS, BARRICADES, AND LIGHTS TO PROTECT THE TRAFFIC AND THE WORK AS DIRECTED BY THE PLANS OR BY THE AGENCY WITH
- JURISDICTION. ALL TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD). 9. THE CONTRACTOR IS REQUIRED TO CONFINE CONSTRUCTION ACTIVITIES TO THE LIMITS OF THE SITE AS SHOWN ON THE CONSTRUCTION PLANS. ANY DAMAGE OR DISRUPTION TO ADJACENT SITES IS THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT IMMEDIATELY. NO OFF-SITE WORK SHALL BE PERFORMED OUTSIDE OF PUBLIC RIGHTS-0F-WAY OR DEDICATED EASEMENTS WITHOUT PRIOR WRITTEN APPROVAL OF THE PROPERTY OWNER.

10. GREAT CARE SHALL BE TAKEN TO AVOID DAMAGE TO VEGETATION OUTSIDE THE CLEARING AND GRUBBING LIMITS. NO DRIVING OR PARKING OF VEHICLES AND/OR STORAGE OF

- MATERIALS AND SUPPLIES SHALL BE PERMITTED OUTSIDE THE LIMITS OF CONSTRUCTION. 11. ALL ELEVATIONS ON THESE PLANS ARE ON THE MICHIGAN STATE PLANE AND NAVD88 DATUM.
- 12. THE PROTECTION OF EXISTING TREES, AS REQUIRED, SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
- 13. ALL CONSTRUCTION SHALL HAVE INSPECTION PROVIDED BY THE CITY OF NOVI. THE CONTRACTOR SHALL CONTACT THE CITY OF NOVI 48 HOURS BEFORE THE START OF CONSTRUCTION. 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL, AND SHALL PROVIDE ALL NECESSARY MATERIAL AND EQUIPMENT TO KEEP DUST IN CHECK AT ALL TIMES. THE CONTRACTOR SHALL RESPOND IMMEDIATELY TO ANY AND ALL COMPLAINTS. DUST CONTROL SHALL BE INCIDENTAL TO THE PROJECT.
- 15. DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER SPRINKLER HEADS, PIPING, LIGHTING AND BURIED ELECTRICAL CABLE, MAILBOXES, FENCES, SIGNS, ETC., THAT MAY OR MAY NOT BE INDICATED ON THESE PLANS. THE CONTRACTOR SHALL REPLACE AND/OR RESTORE ALL COMPONENTS OF SUCH SYSTEMS. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, MINIMUM STANDARD REQUIREMENTS, OR AS SPECIFIED HEREIN; WHICHEVER IS MORE STRINGENT.

16. ROADWAY, DRIVEWAY, AND PARKING AREA FINAL RESTORATION SHALL BE PERFORMED WITH SURFACE AND BASE MATERIALS MATCHING EITHER THE EXISTING MATERIALS IN QUALITY AND THICKNESS, PER MINIMUM REQUIREMENTS, OR PER THE FOLLOWING; WHICHEVER IS MORE STRINGENT:

- A. ASPHALT ROADWAYS 5E1 ON 3E1, SEE SECTION
- B. ASPHALT DRIVEWAYS 5E1 ON 3E1, SEE SECTION
- C. GRAVEL ROAD AND DRIVEWAYS 8" MDOT 22A GRAVEL
- D. CONCRETE ROADS 8" 4000 PSI CONCRETE
- E. CONCRETE DRIVEWAYS 6" 4000 PSI CONCRETE

17. ALL LOT MARKERS AND MONUMENT POINTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR. 18. FINAL CLEANUP AND RESTORATION SHALL CONSIST OF FINE GRADING OF CONSTRUCTION AREAS, REMOVAL OF CONSTRUCTION SIGNS, ETC. TOPSOIL SHALL BE SPREAD OVER ALL DISTURBED AREAS, FOLLOWED BY SEED, FERTILIZER AND EROSION MAT OR STRAW MULCH, OR AS FURTHER REQUIRED BY THE LANDSCAPING PLANS AND SPECIFICATIONS. ALL REQUIRED RESTORATION ITEMS NOT SPECIFICALLY IDENTIFIED AS A PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

19. THE UTILITY POLES SHOWN ON THESE DRAWINGS ARE INTENDED TO SHOW ONLY THE LOCATION OF EXISTING POLES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE

QUANTITY AND DIRECTION OF OVERHEAD LINES. THE COST FOR SUPPORTING AND RELOCATING POLES SHALL BE INCIDENTAL TO THE PROJECT.

20. THE MEANS AND METHODS OF CONTROLLING GROUNDWATER AND DEWATERING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL COST ASSOCIATED WITH DEWATERING SHALL BE INCIDENTAL TO THE CONTRACT.

GENERAL LEGEND

UNDERGROUND ELECTRIC LINES

UNDERGROUND TELEPHONE LINES

UNDERGROUND CABLE TELEVISION LINES

CONCRETE CURB AND GUTTER (STANDARD)

CONCRETE CURB AND GUTTER (REVERSED)

THICKENED SLAB CURB/WALK

STORM SEWER

SANITARY SEWER

OVERHEAD LINES

STEAM LINES

FENCE LINE

SETBACK LINE

STORM MANHOLE

CATCH BASIN

YARD BASIN

**INLET BASIN** 

END SECTION

ROOF/DOWN SPOUT

STORM CLEAN OUT

SANITARY MANHOLE

SANITARY CLEAN OUT

SANITARY PUMP STATION

SANITARY RISER

OVERFLOW/OUTLET STRUCTURE

PUBLIC LIGHTING LINES

WATER MAIN

GAS MAIN

- 1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
- . WITH THE EXCEPTION OF AN AMOUNT OF EXCAVATED MATERIALS SUFFICIENT FOR BACKFILLING AND CONSTRUCTION OF FILLS AS CALLED FOR ON THE PLANS AND AS INDICATED BELOW, ALL BROKEN CONCRETE, STONE AND EXCESS EXCAVATED MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN THEIR OWN DISPOSAL GROUND, AND WILL RECEIVE NO ADDITIONAL COMPENSATION FOR DISPOSING OF ANY OF THE EXCESS MATERIALS. MATERIALS ACCEPTABLE TO THE ENGINEER MAY BE DISPOSED OF ON-SITE AT THE CONTRACTORS EXPENSE IN A MANNER APPROVED IN ADVANCE BY THE ENGINEER.
- 3. THE EDGE OF EXISTING PAVEMENT SHALL BE CLEANED OF EARTH AND OTHER FOREIGN MATERIAL BEFORE ADJACENT POURS ARE PLACED.
- 4. ALL BULKHEADING AND/OR SEWER PIPE REMOVAL NECESSITATED BY THE REMOVAL OF DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE STRUCTURE REMOVAL.
- 5. STREET SIGNS IN THE WAY OF CONSTRUCTION WILL BE REMOVED AND RESET IMMEDIATELY IN A TEMPORARY LOCATION, AS APPROVED BY ENGINEER. 6. THE CONTRACTOR SHALL PROTECT ALL EXISTING SIGNS AND POSTS SCHEDULED TO REMAIN, AS DIRECTED BY THE ENGINEER
- ALL UNDERGROUND UTILITIES NOT INDICATED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PRIVATE PROPERTY (INCLUDING BUILDINGS AND FOUNDATIONS) THROUGHOUT CONSTRUCTION AND SHALL MAINTAIN SAFE PEDESTRIAN ACCESS AT ALL TIMES.

**EXISTING** 

<del>----\/w----\/w-------</del>

----- STEAM -----

\_\_\_\_\_\_UGT\_\_\_\_\_\_\_UGT \_\_\_\_\_

PROPOSED

9. THE REMOVAL OF PAVEMENT, CURBS AND WALKS SHALL INCLUDE ALL REQUIRED SAWCUTTING. CURB REMOVAL IS INCIDENTAL TO PAVEMENT REMOVAL.

## **UTILITY NOTES**

- 1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
- 2. REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL:

A. WATER SUPPLY, METERING, SPRINKLER AND FDC PIPING, DESIGN AND COORDINATION

- B. BUILDING SEWER, BUILDING DRAIN DESIGN AND CONNECTIONS TO CLEAN OUTS AND ROOF CONNECTORS
- C. GAS, ELECTRIC AND COMMUNICATION SERVICES, AND LIGHTING DETAILS
- D. ALL BUILDING ACCESS WALKS AND ENTRY DETAILS, INCLUDING SUPPORTED SLABS
- E. ALL WORK TO CONSTRUCT THE BUILDING AND ALL ITEMS CONNECTED TO IT
- 3. ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY
- DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557. COMPACTED SAND BACKFILL SHALL ALSO BE PROVIDED FOR ALL SEWER TRENCHES LOCATED UNDER, OR WITHIN, THREE FEET OF PAVEMENT. 4. THE COST OF ALL TREE, STUMP, FOUNDATION AND/OR STRUCTURE REMOVAL AND DISPOSAL NOT INCLUDED IN THE PROPOSAL SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE PRICE BID FOR WATERMAIN, SANITARY SEWER STORM SEWER AND PAVING WORK
- 5. A MINIMUM VERTICAL CLEARANCE OF 18 INCHES IS REQUIRED AT UTILITY CROSSINGS (MASURED FROM THE OUTSIDE OF PIPE TO THE OUTSIDE OF PIPE). POSITIVE PROVISIONS SHALL BE MADE TO ENSURE THAT ALL UTILITY TRENCHES ARE FREE DRAINING DURING ALL PHASES OF CONSTRUCTION.
- 6. THE REQUIRED BEDDING FOR SEWER PIPE SHALL CONSIST OF A MAXIMUM 3/4 INCH DIAMETER CRUSHED STONE.
- 7. THE MINIMUM SLOPE FOR A BUILDING LEAD IS 1%. LEADS SHALL ONLY BE CONNECTED TO THE MAIN LINE WITH WYES.
- 8. ALL STORM SEWER PIPE SHALL BE CONSTRUCTED WITH RUBBER GASKET (PREMIUM) JOINTS.
- 9. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL UTILITY LINES AND STRUCTURES, AS OUTLINED ON THE DEMOLITION PLAN, WITH THE INSTALLATION OF UTILITY IMPROVEMENTS.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING GRADE MODIFICATIONS INDICATED ON THE FINISHED LANDSCAPE PLAN, AND COORDINATE THE ACTUAL FINISH GRADE OF FIRE HYDRANTS, GATE VALVE CASTINGS, MANHOLES, YARD DRAINS, CLEAN OUTS AND OTHER UTILITY STRUCTURES. ENSURE THAT ALL FINISH GRADING IS PERFORMED IN A MANNER THAT ACCOMPLISHES THE PROJECT DESIGN OBJECTIVES AND PROVIDES FOR POSITIVE DRAINAGE OF ALL AREAS. ANY SUBSTANTIAL GRADE CHANGES WHICH MAY CAUSE FUNCTIONAL PROBLEMS SHALL BE REPORTED PROMPTLY TO THE ENGINEER WHO SHALL EVALUATE THE CONDITIONS AND PROVIDED CORRECTIONAL RECOMMENDATIONS TO THE OWNER FOR FINAL DETERMINATION.
- 11. CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, SPRINKLERS ETC., IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO PLACING THE PAVEMENT MATERIALS. ENSURE THAT ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED AND THAT THE TRENCHES ARE PROPERLY BACKFILLED AND COMPACTED. 12. THE CONTRACTOR SHALL REMOVE UTILITIES, WHICH HAVE BEEN ABANDONED IN PLACE, AS REQUIRED TO COMPLETE INSTALLATION OF NEW UTILITIES. WHENEVER ABANDONED UTILITIES ARE CUT, CONTRACTOR
- SHALL COMPLETELY CAP BOTH ENDS TO PREVENT THE INFILTRATION OF SOILS.
- 13. NO CONNECTION MAY BE MADE TO ANY EXISTING WATER MAIN UNTIL THE NEW MAIN HAS PASSED ALL PRESSURE AND BACTERIOLOGICAL TESTING.
- 14. ROADWAY, DRIVEWAY AND PARKING AREA CROSSINGS SHALL BE TEMPORARALY CONDITIONED IMMEDIATELY AFTER CROSSING BY PLACING 8" OF MDOT 22A GRAVEL OR SLAG AGGREGATE, AND SHALL BE MAINTAINED IN GOOD, DUST FREE CONDITION UNTIL PAVEMENT RESTORATION IS MADE.

## PAVING AND GRADING NOTES

- 1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
- 2. THE PAVING CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, SPRINKLERS, ETC. IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO PLACING THE PAVEMENT MATERIALS. ENSURE THAT ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED AND THAT THE TRENCHES ARE PROPERLY BACKFILLED AND COMPACTED.
- 3. BUTT JOINTS SHALL BE PLACED AT ALL LOCATIONS WHERE AN EXISTING ASPHALT PAVEMENT SURFACE IS BEING DISTURBED BY REMOVALS AND/OR THE INSTALLATION OF NEW ASPHALT PAVEMENT.
- 4. ALL PAVEMENT AREAS SHOULD BE CLEARED AND GRUBBED BY REMOVING SURFACE VEGETATION, TOPSOIL, DEBRIS AND OTHER DELETERIOUS MATERIALS.
- 5. THE PLACEMENT OF THE FINAL ASPHALT LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED, OR AS APPROVED BY THE OWNER. A BOND COAT OF SS-1H EMULSION
- SHALL BE APPLIED (AT A RATE OF 0.10 GALLONS/S.Y.D.) BETWEEN THE LEVELING AND WEARING COURSE WHEN 48 HOURS HAVE ELAPSED BETWEEN PLACEMENTS. 6. THE FINAL SUB-GRADE SHALL BE THOROUGHLY PROOF-ROLLED UNDER THE OBSERVATION OF THE SOILS ENGINEER.
- 7. PROPOSED AGGREGATE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVEMENT EDGE/BACK OF CURB.
- 8. ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557.
- 9. NO FROZEN MATERIAL SHALL BE PERMITTED AS BACKFILL UNDER ANY ROADWAY, DRIVEWAY OR PARKING AREA.
- 10, PRIOR TO THE START OF ANY FILLING, THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND ALL OTHER UNACCEPTABLE SOIL FROM THE FILL AREAS, AND PROPERLY BACKFILL WITH ACCEPTABLE SOIL.
- 11. BARRIER FREE SIGNAGE SHALL BE PLACED IN FRONT OF EVERY DESIGNATED BARRIER FREE STALL. THE CONTRACTOR SHALL COORDINATE STANDARD AND VAN ACCESSIBILITY SIGNAGE AS INDICATED ON THE PLANS. 12. ALL BARRIER FREE RAMPS TO BE A.D.A. COMPLIANT.
- 13. GENERAL GRADING REQUIREMENTS ARE AS FOLLOWS:
- A. FINISH GRADE AT EXISTING BUILDING SHALL MATCH BRICK LEDGES, DOORWAYS OR BASEMENT WINDOWS
- B. MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING (± 2%)
- C. SIDEWALK CROSS SLOPE 2% MAX UNLESS OTHERWISE NOTED (EXCLUDING RAMPS)
- D. PAVEMENT SLOPES (1.0% MINIMUM, 4.0% MAXIMUM) UNIFORMLY BETWEEN FINISH GRADE ON PLANS
- E. LAWN AREAS ± 1% MINIMUM TO 25% (BERMS) MAXIMUM
- 14. ALL PROPOSED GRADES ARE AT THE GUTTER UNLESS OTHERWISE NOTED. SEE DETAILS FOR FACE OF CURB, TOP OF CURB AND ASPHALT ADJUSTMENTS

FENCE POST

PAY PHONE

U.S. MAILBOX

WETLAND FLAG

SPOT ELEVATION

SOIL BORING

TREE

PARKING METER

RESIDENTIAL MAILBOX

BLDG CORNER (FIELD LOCATED)

- 15. REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL:
- A. WATER SUPPLY, METERING, SPRINKLER AND FDC PIPING, DESIGN AND COORDINATION
- B. BUILDING SEWER, BUILDING DRAIN DESIGN AND CONNECTIONS TO CLEAN OUTS AND ROOF CONNECTORS
- C. GAS, ELECTRIC AND COMMUNICATION SERVICES AND LIGHTING DETAILS AND COORDINATION.
- D. ALL BUILDING ACCESS WALKS AND ENTRY DETAILS, INCLUDING SUPPORTED SLABS E. ALL WORK TO CONSTRUCT THE BUILDING AND ALL ITEMS CONNECTED TO IT
- 16. PRIOR TO THE PLACEMENT OF ANY BASE ASPHALT OR LEVELING COURSE, THE CURBS SHALL BE PARTIALLY BACKFILLED AND THE SUB-GRADE SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF THE SOILS ENGINEER. 17. ALL SIDEWALK AND PATHWAYS IN ANY PUBLIC R.O.W. SHALL BE INSPECTED BY THE AGENCY WITH JURISDICTION.

#### **EXISTING** PROPOSED **EXISTING PROPOSED GUY WIRE ANCHOR** UTILITY FLAG \$ \$ 6 € SIGN POST GUARD POST/BOLLARD

FDC CONNECTION WATER METER POST INDICATOR VALVE WELL HEAD IRRIGATION CONTROL BOX LAWN IRRIGATION HEAD GAS VALVE **GAS MANHOLE** GAS RISER GAS METER ELECTRIC MANHOLE

GATE VALVE

FIRE HYDRANT

ELECTRIC RISER

ELECTRIC METER

TELEPHONE MANHOLE

TELEPHONE CROSS BOX

TRAFFIC CONTROL BOX

PUBLIC LIGHTING MANHOLE

AIR CONDITIONER

TELEPHONE RISER

LIGHT POLE

CABLE RISER

UTILITY POLE

STOP BOX AND VALVE

ELECTRIC TRANSFORMER 

ASPH. CONC. A.C.

G.P. C.L.F. O.H. F.I.P.

M. R.

F.M.

OVERHANG FOUND IRON SET IRON FOUND IRON PIPE MEASURED RECORD FOUND MONUMENT

× 150.23

**ASPHALT** 

CONCRETE

**GUARD POST** 

DOOR LEDGE

FINISHED FLOOR

AIR CONDITIONER

CHAIN-LINK FENCE

× XXX.XX

**SET NAIL** 

## **EROSION CONTROL NOTES**

- 1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
- 2. ALL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF NOVI.
- 3. ANY EROSION AND SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED WITHIN THE WORK AREA AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. (WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, PONDS AND WETLANDS)
- 4. THE CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS DIRECTED ON THESE PLANS AND WHENEVER OTHERWISE REQUIRED BY THE WORK. THE CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER CHANGES
- HAVE BEEN ACCOMPLISHED. 5. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENTATION CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF DIRT OUT OF THE WORK AREA.
- 6. THE CONTRACTOR SHALL PRESERVE NATURAL VEGETATION AS MUCH AS POSSIBLE.
- 7. PROTECT ALL EXISTING TREES, INCLUDING THEIR BRANCHES AND ROOTS, FROM DAMAGE DUE TO THIS WORK UNLESS SPECIFICALLY IDENTIFIED FOR REMOVAL.
- 8. VEGETATION STABILIZATION OF ALL DISTURBED AREAS SHALL BE ESTABLISHED WITHIN 15 DAYS OF COMPLETION OF FINAL GRADING.
- 9. THE CONTRACTOR SHALL SWEEP THE EXISTING STREETS SURROUNDING THE PROJECT SITE ONCE A WEEK, OR AS DIRECTED BY THE ENGINEER OR INSPECTOR. STREET SCRAPING SHALL BE PERFORMED IN CONJUNCTION WITH THIS SWEEPING ON AN AS NEEDED BASIS.
- 10. THE SEDIMENT CONTROL FENCING INDICATED ON THIS PLAN IS NOT INTENDED TO SHOW THE EXACT LOCATION OF THE FENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE REQUIRED TO CONTAIN SEDIMENT.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH ALL APPLICABLE NPDES REGULATIONS, INCLUDING: INSPECTION, RESTORATION, AND
- RECORD KEEPING REQUIREMENTS. 12. THE CONTRACTOR IS RESPONSIBLE FOR ON-GOING MAINTANANCE OF ALL SOIL EROSION CONTROLS AS INDICATED BY THESE PLANS.
- 13. CONSTRUCTION ACTIVITIES (INCLUDING INSTALLATION OF PIPE AND ASSOCIATED VALVES, STRUCTURES, BACK FILLING, SURFACE RESTORATION, AND REMOVAL OF EXCESS EXCAVATED MATERIAL) SHALL BE ACCOMPLISHED IN ONE CONTINOUS OPERATION.
- 14. PAVEMENT AND/OR VEGETATION SHALL NOT BE STRIPPED FROM AN AREA UNLESS CONSTRUCTION ACTIVITIES ARE TO COMMENCE IN THAT AREA WITHIN THE NEXT THREE DAYS.
- 15. IF FOR ANY REASON PERMANENT STABILIZATION CAN NOT BE PROVIDED WITHIN 15 DAYS OF THE COMPLETION OF PIPE LAYING OPERATIONS, TEMPORARY STABILIZATION SHALL BE PROVIDED AT ALL DISTURBED AREAS. TEMPORARY STABILIZATION SHALL FURTHERMORE BE PROVIDED DURING THE NON-GROWING SEASON (OCTOBER 1
- THROUGH APRIL 20) FOR ALL AREAS TO BE SEEDED. 16. TEMPORARY STABILIZATION SHALL CONSIST OF EITHER SMALL GRAIN STRAW OR GRASS HAY SPREAD AT THE RATE OF 1.5 TO 2 TONS PER ACRE, OR MULCH BLANKETS, WHICH SHALL BE ANCHORED IN PLACE TO PREVENT DISPLACEMENT FROM WIND AND RAIN. TEMPORARY STABILIZATION SHALL BE REPAIRED AS OFTEN AS NECESSARY, AS
- DETERMINED BY THE AGENCY WITH JURISDICTION. 17. ALL DEWATERING SHALL BE ACCOMPLISHED IN A MANNER THAT WILL NOT CONTRIBUTE TO DEPOSITION OF SEDIMENT IN ROAD DITCHES OR OPEN WATER.
- 19. SEDIMENT CONTROL FENCING SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED STORM EVENTS. IF THE FENCE IS SAGGING, OR SOIL HAS REACHED ONE HALF OF THE HEIGHT OF THE FABRIC, THE SOIL BEHIND THE FABRIC SHALL BE REMOVED AND DISPOSED OF IN A STABLE AREA OF THE SITE. IF WATER IS SEEPING UNDER THE FENCE, OR THE FABRIC IS DECMOPOSED OR OTHERWISE INEFFECTIVE, THE FENCE SHALL BE REMOVED AND PROPERLY REINSTALLED AS INDICATED ON THESE PLANS.
- 20. MUD MAT ENTRANCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH STORM RAINFALL. THE SURROUNDING ROADS SHALL ALSO BE INSPECTED AT THIS TIME FOR EVIDENCE THAT MUD IS BEING TRACKED OFF OF THE SITE. MAINTENANCE SHALL INCLUDE THE INSTALLATION OF ADDITIONAL LAYERS OF STONE WHEN THE ORIGINAL STONE BECOMES COVERED WITH MUD. ALL SEDIMENT DROPPED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE REMOVED IMMEDIATELY BY SWEEPING AND SCRAPING (AS MAY BE REQUIRED BY THE ENGINEER).
- 21. SEDIMENT INLET FILTERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURNIG PROLONGED STORM EVENTS. THE FILTERS SHALL BE CLEANED PERIODICALLY THROUGHOUT CONSTRUCTION TO AVOID CLOGGING. FILTERS THAT CANNOT BE MAINTAINED BY CLEANING SHALL BE COMPELTELY REPLACED.

## **EROSION CONTROL SEQUENCE**

- 1. INSTALL MUD MATS, SILT FENCE AND INLET FILTERS AT ALL EXISTING LOCATIONS AS SHOWN AND AS REQUIRED TO ACHIEVE ON-SITE CONTAINMENT. 2. INSTALL STORM SEWER AND ALL ASSOCIATED STORM WATER IMPROVEMENTS AS SHOWN ON PLANS. IMMEDIATELY INSTALL INLET FILTERS AT ALL CATCH BASINS.
- 3. ROUGH GRADE THE PROJECT "WORK AREA" AS NEEDED.
- 4. INSTALL SANITARY SEWER AS SHOWN ON PLANS.
- 5. INSTALL WATER MAIN AS SHOWN ON PLANS.
- 6. INSTALL OTHER UTILITIES (GAS, ELECTRIC, PHONE, CABLE, ETC.) AND/OR ALL NEEDED CONDUITS AND SLEEVES.

18. THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AS AMENDED.

- 7. INSTALL PAVEMENT BACKFILL AND SEED & MULCH ALL DISTURBED AREAS 8. CLEAR ALL ACCUMULATED SILT AND REMOVE ALL EROSION CONTROL DEVICES.
- 9. INSTALL LANDSCAPING MATERIALS AS INDICATED PER PLANS & RE-SEED, FERTILIZE AND MULCH ALL DISTURBED AREAS.

Surveyors Planners

> 28 West Adams Road Suite 1200

Landscape Architects

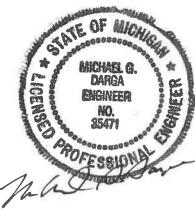
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05.18.2017 07 07 2017 Site Plan Review 08.04.2017 ZBA Submittal

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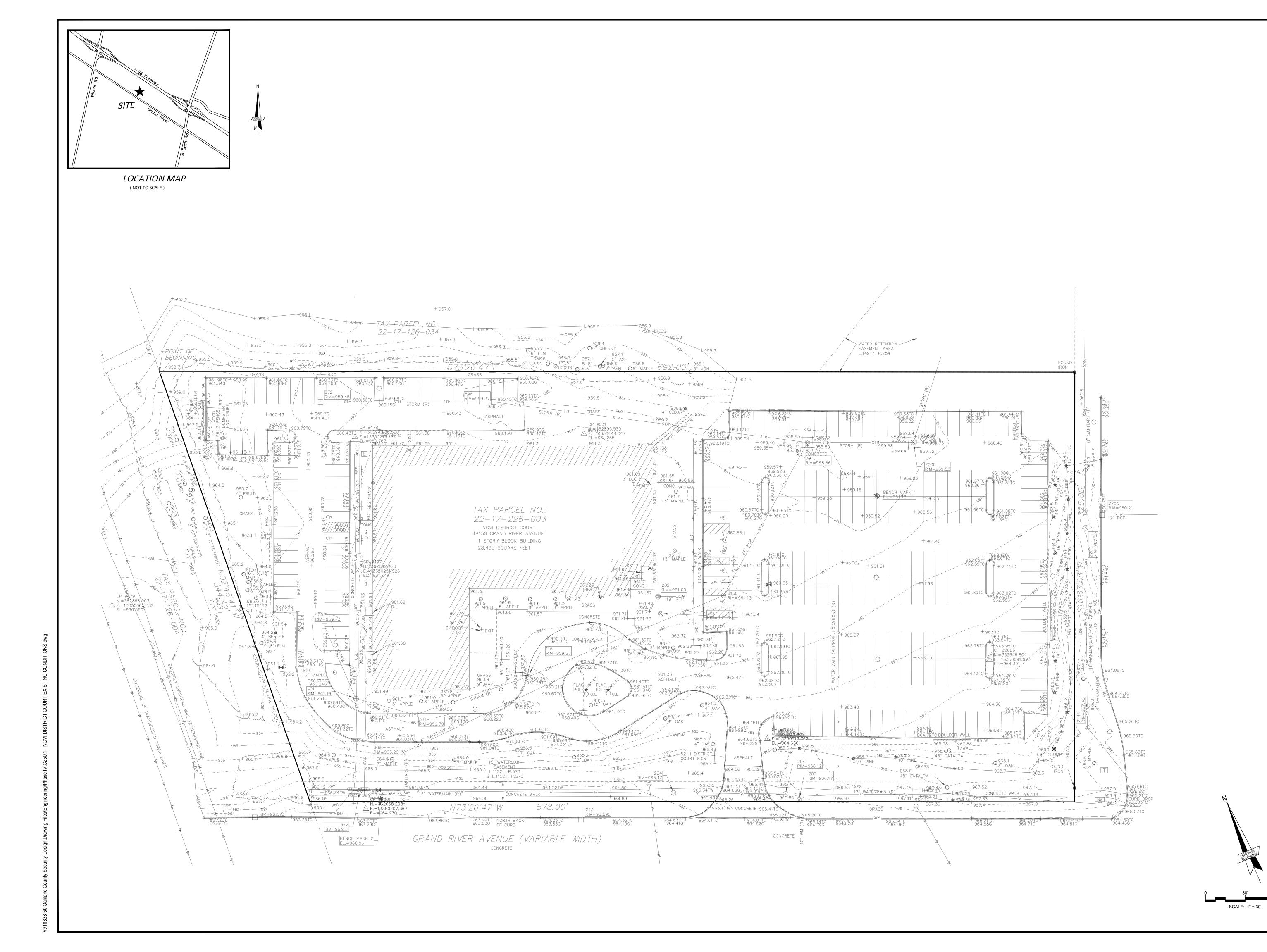
General Notes and Legend

Oakland County Security Study

City of Novi

Oakland County Michigan 09.27.2016

Scale: NTS C100.1 Project: 18833.60





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Surveyors
Planners
Landscape Architects

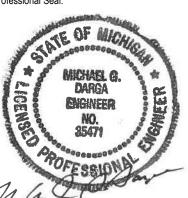
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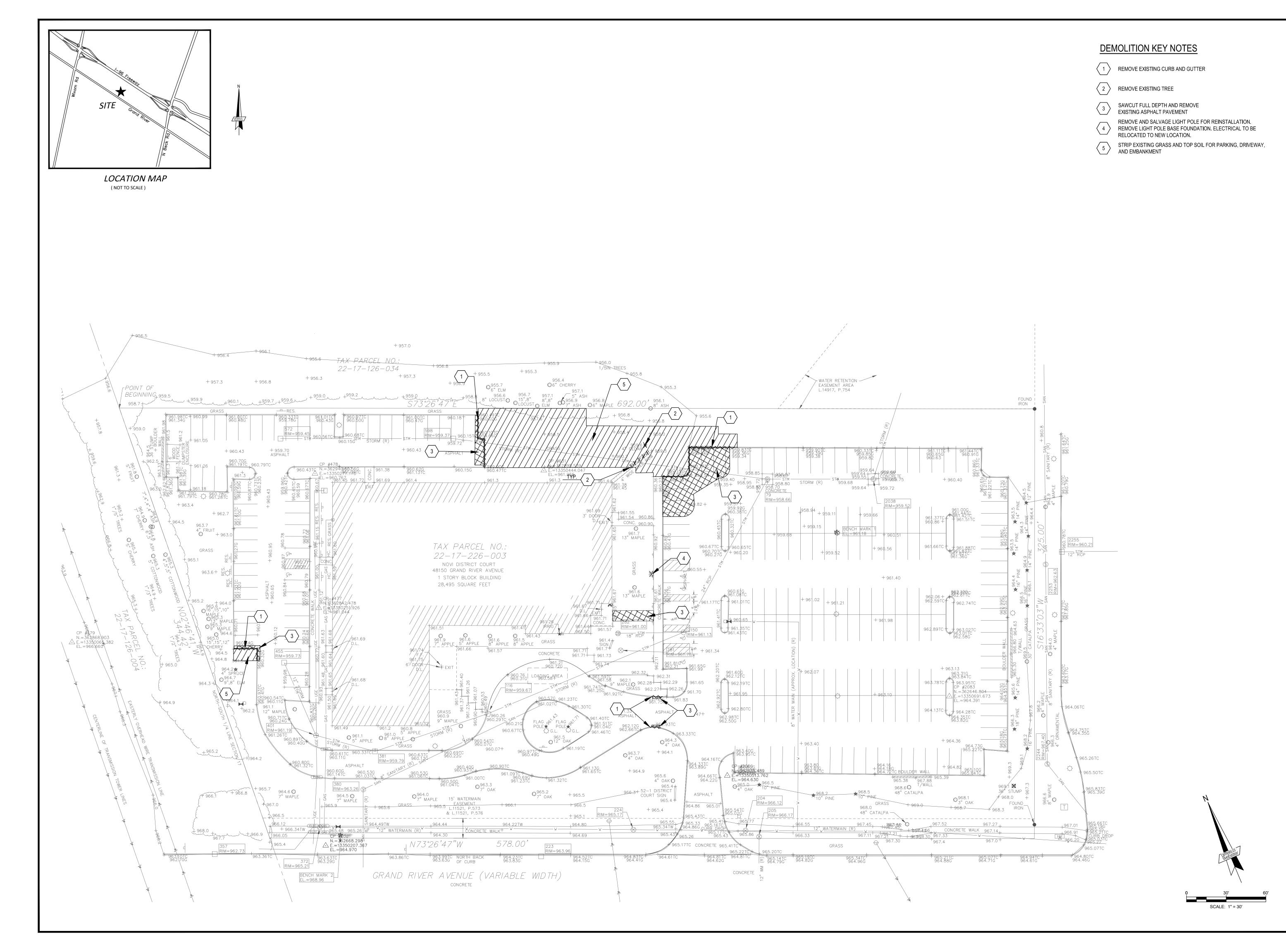
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Phase IV
Novi District Court
Existing Conditions

Oakland County Security Study

City of Novi Oakland County Michigan

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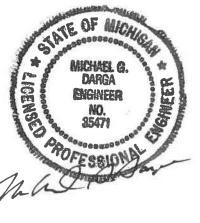
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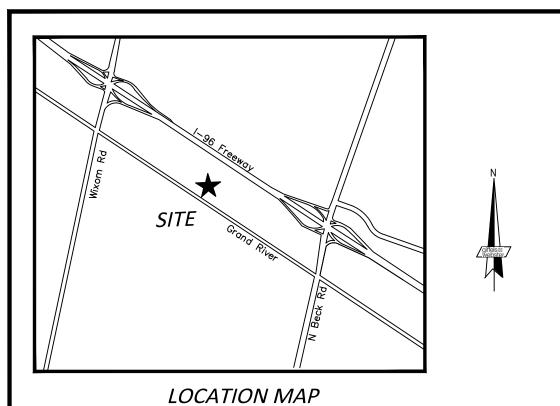
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Phase IV
Novi District Court
Demolition Plan

Oakland County Security Study

City of Novi Oakland County Michigan

05.08.2017	
1"=30'	
C350.1	
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( NOT TO SCALE )

PARKING ANA	LYSIS (PUBLIC)	PARKING ANAL	YSIS (EMPLOYEE)
EXISTING	182	EXISTING	
REMOVED	6	REMOVED	
ADDED	0	ADDED	
FINAL	176	FINAL	

PARKING ANALYSIS (PUBLIC)		PARKING ANAL'	YSIS (EMPLOYEE)	
				· • · • · • · · · · · · · · · · · · · ·
	EXISTING ADA	7	EXISTING ADA	
	REMOVED ADA	0	REMOVED ADA	
	ADDED ADA	0	ADDED ADA	
	FINAL ADA	7	FINAL ADA	

## SITE PLAN KEY NOTES

- 1 PROVIDE AND INSTALL STRONGARM M30 ANTI-RAM GATE AND FOUNDATIONS. SEE DETAIL ON SHEET C800.7.
- 2 PROVIDE AND INSTALL EXIT LOOP PER GATE MANUFACTURES STANDARDS.
- SALVAGED LIGHT POLE TO BE REINSTALLED. PROVIDE AND INSTALL FOUNDATION, CONDUIT AND WIRING FOR LIGHT. LIGHT POLE TO BE SAME HEIGHT AS REMAINING FIXTURES.
- 4 100 FOOT STANDOFF LINE.
- PROVIDE AND INSTALL 3' HIGH RETAINING WALL. PRODUCT TO BE FIELDSTONE BY OAKS. COLOR SAMPLE REQUIRED FOR OWNER SELECTION. SEE DETAILS ON SHEET C800.8.
- PROVIDE AND INSTALL STANDARD DUTY ASPHALT PAVEMENT. SEE DETAIL ON SHEET C800.7.
- 7 PROVIDE AND INSTALL REVERSE CONCRETE CURB AND GUTTER. SEE DETAIL ON SHEET C800.7.
- PROVIDE AND INSTALL 4" CONCRETE WALK. SEE DETAIL ON SHEET C800.7.

- PROVIDE AND INSTALL CONCRETE CURB AND GUTTER. SEE DETAIL ON SHEET C800.7.
- PROVIDE AND INSTALL STANDARD 6" BOLLARD. SEE DETAIL ON SHEET C800.7.
- PROVIDE AND INSTALL COUNTY STANDARD PLANTER. PLANTER TO BE INSTALLED BY COUNTY FACILITIES. NOT IN CONTRACT.
- INSTALL AND MAINTAIN TEMPORARY SEDIMENT INLET FILTER. SEE DETAIL ON SHEET C800.7.
- CONTRACTOR TO COORDINATE ELECTRICAL AND INTERCOM CONNECTION TO CONTROL ROOM.
- PROVIDE AND INSTALL 9' BY 18' PARKING STALLS WITH 4" YELLOW WATERBORNE STRIPING
- WATERBORNE STRIPING
- PROVIDE AND INSTALL ECHELON II MAJESTIC 3 RAIL FENCE. SEE DETAIL ON SHEET C800.8
- PROVIDE AND INSTALL ANTI-RAM CABLE POST AND RAIL FENCE. SEE DETAILS ON SHEET C800.10.

- PROVIDE AND INSTALL "DO NOT ENTER" SIGN R5-1 ON MDOT 3LB POST.
- PROVIDE AND INSTALL "AUTHORIZED VEHICLES ONLY" SIGN R5-11 ON MDOT 3LB POST.
- (19) PROVIDE AND INSTALL 6 BIKE RACKS PER DETAIL ON SHEET C800.7
- PROVIDE AND INSTALL WALL LIGHT FIXTURE TO MATCH EXISTING LIGHT FIXTURES ON BUILDING PERIMETER.

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Phase IV
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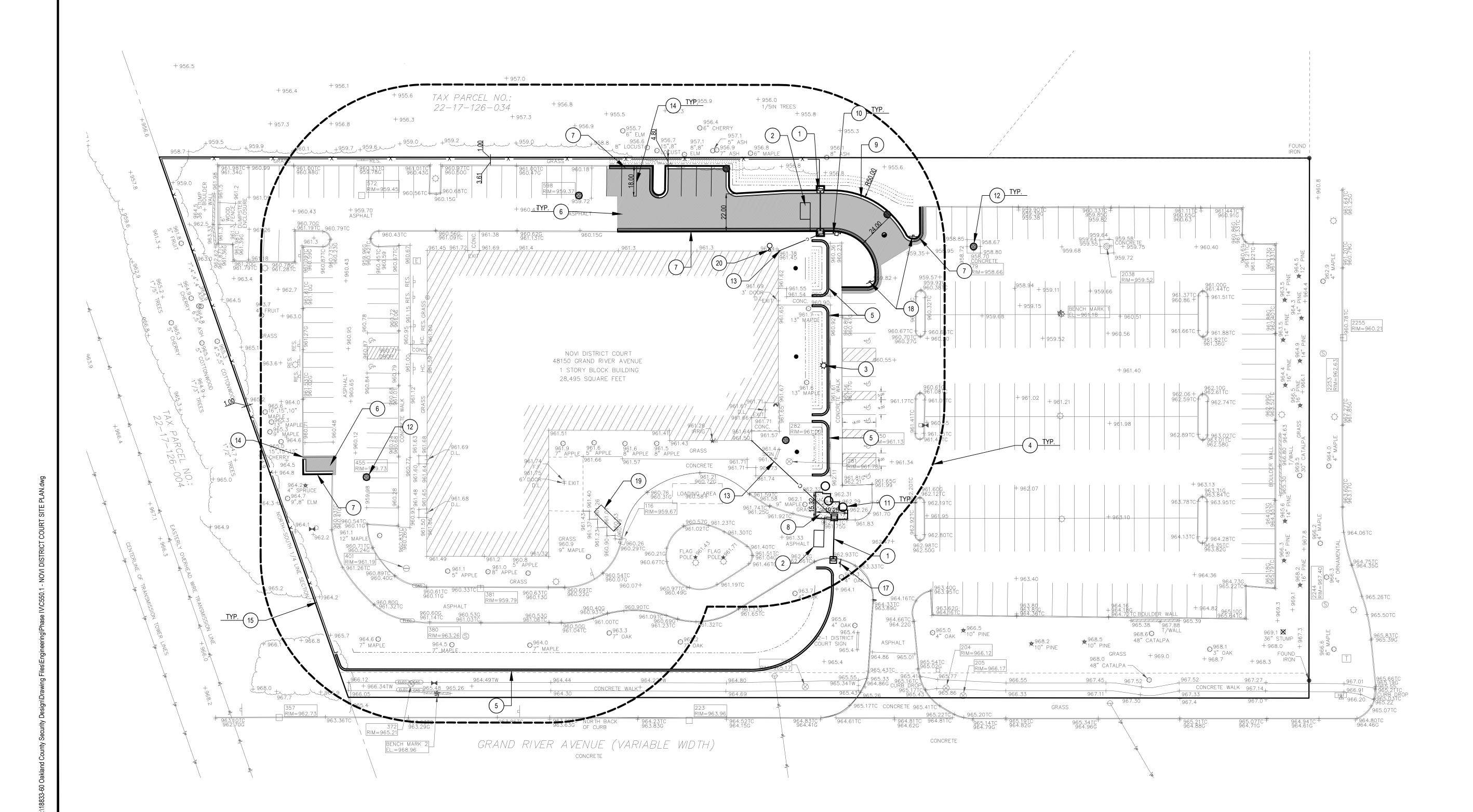
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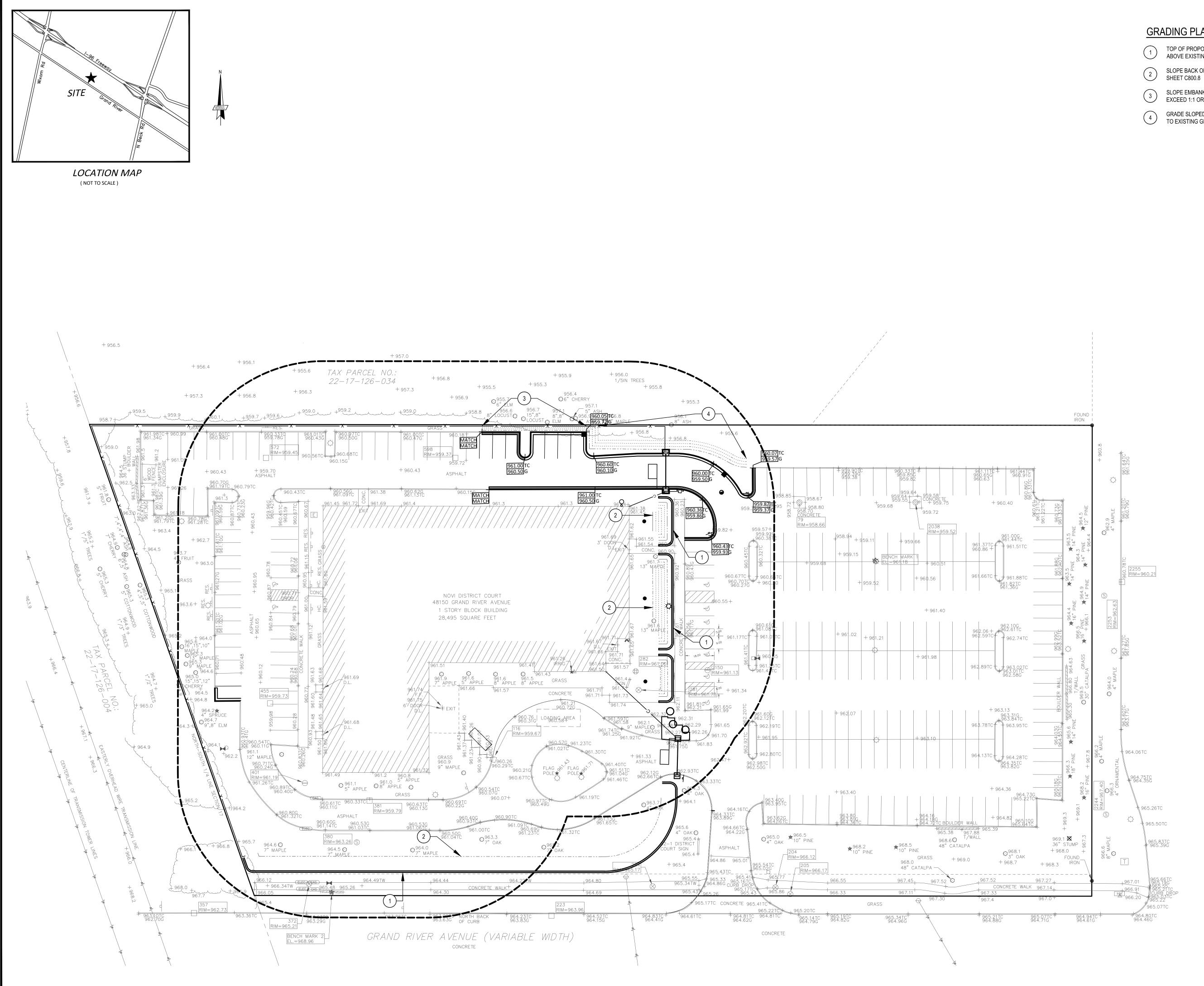
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 C550.1

 Project:
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SCALE: 1" = 30'

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- TOP OF PROPOSED RETAINING WALL TO BE NOMINALLY 3' ABOVE EXISTING GRADE. STEP WHERE NECESSARY.
- SLOPE BACK OF BERM TO EXISTING GRADE PER DETAIL ON SHEET C800.8
- SLOPE EMBANKMENT PER DETAIL ON C800.8. SLOPE NOT EXCEED 1:1 OR BE SLOPED ON TO OTHER PARCEL
- GRADE SLOPED AREA FROM BEHIND GATE CONTROLLER TO EXISTING GRADE. SLOPE NOT TO EXCEED 1:2

Landscape Architects

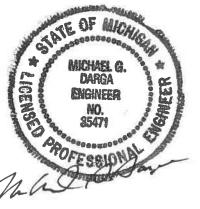
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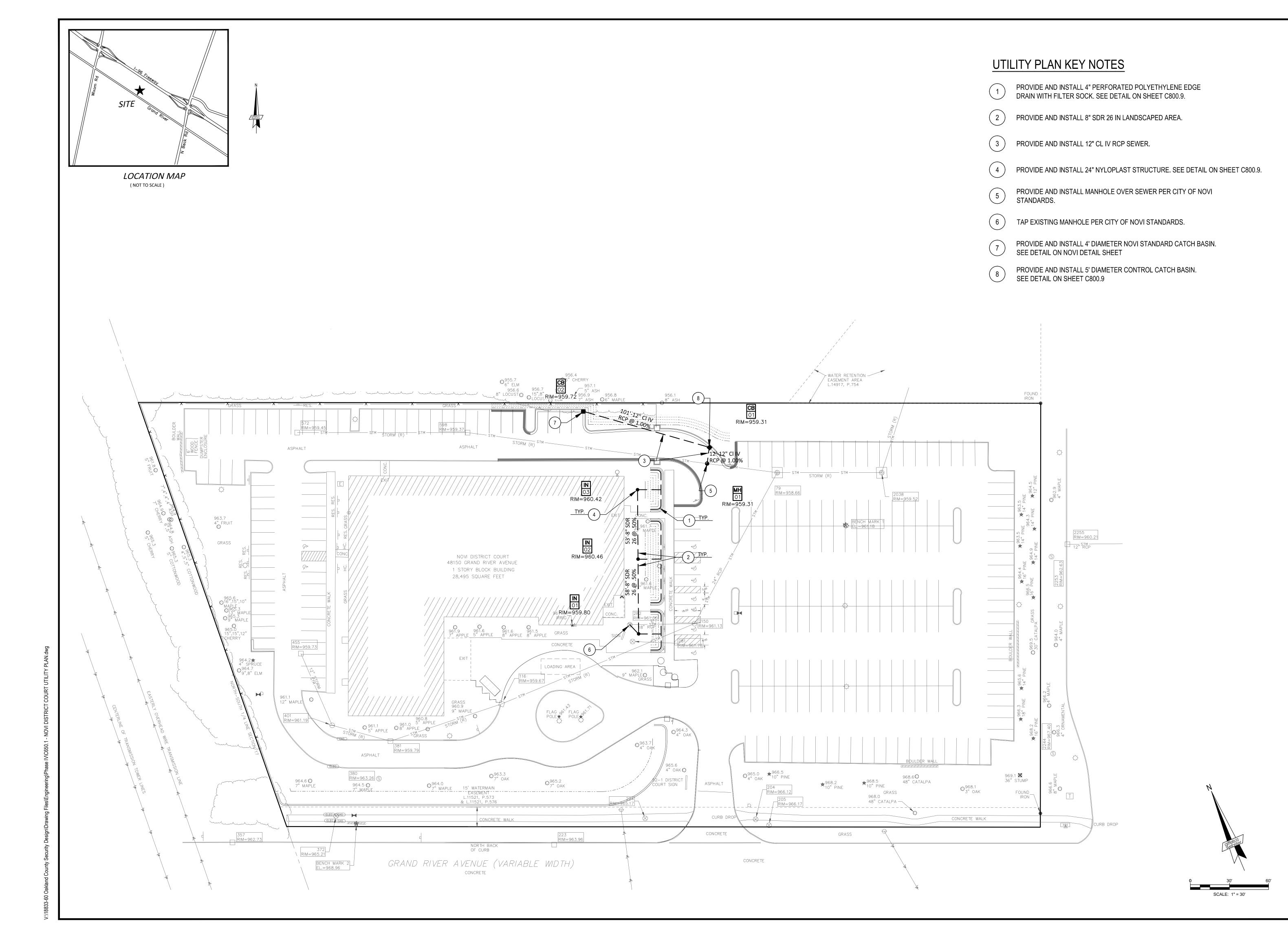
Phase IV Novi District Court **Grading Plan** 

Oakland County Security Study

City of Novi Oakland County Michigan

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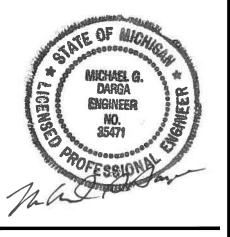
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Executive:	STC
Manager:	MGD
Designer:	AFP
Quality Control:	STC
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T-01-N R-08-E

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Oakland County Facilities

Management

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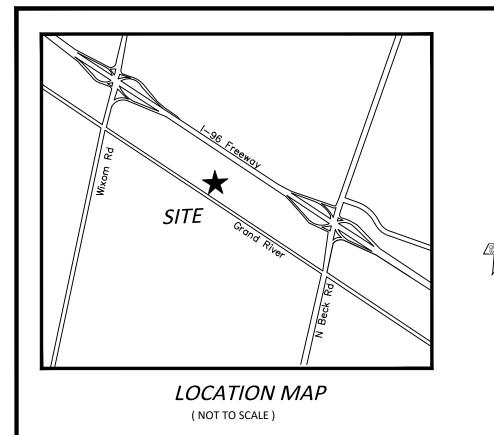
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Phase IV
Novi District Court
Utility Plan

Oakland County Security Study

City of Novi Oakland County Michigan

Date:	05.08.2017
Scale:	1"=30'
Sheet:	C650.1
Project:	18833 60



co	MPOSITE RU	NOFF COE	FICIENT	CALCUL	ATION
		L	andscaped	Paved/Roof	
	Catchment	Total Area	Area	Area	С
	Identification	(Acres)	(Acres)	(Acres)	

0.03

0.04 0.02

CB-02

C = 0.35 C = 0.95

0.02

0.03

0.04 0.02 0.06 0.07

0.00

0.00 0.00 0.80 0.82 0.35 0.38 0.40

9	jiff(	els	
V	ve	DS <sup>®</sup>	ter

Storm Sewer Design Novi District Court 18833-60

		Prepared By Working Date Design Storm Eve	7/5	AFP 5/2017 10-year storm City of NOVI									
From	То	Catchment Area (acres)	Runoff C Factor	Total Area (acres)	Total Time of Concentration Tc (min)	Total Rainfall Intensity (in/hr)	Total Flow (cfs)	Pipe Capacity (cfs)	Pipe Diameter (inches)	Pipe Length (feet)	Pipe Slope	Pipe Velocity (fps)	Time of Flo (min)
CB 02	CB 01	0.09	0.82	0.09	20.00	3.89	0.29	3.56	12.00	101.00	1.00	4.55	0.37
CB 01	MH 01	0.08	0.80	0.17	20.37	3.86	0.52	3.56	12.00	12.00	1.00	4.55	0.04
IN 03	IN 02	0.02	0.40	0.02	20.00	3.89	0.03	0.85	8.00	53.00	0.50	2.45	0.36
IN 02	IN 01	0.04	0.38	0.06	20.36	3.86	0.09	0.85	8.00	58.00	0.50	2.45	0.39
IN 01	EXMH	0.03	0.35	0.09	20.75	3.82	0.12	0.85	8.00	10.00	0.50	2.45	0.07
Proposed Flow	Existing Outlet 24"	0.26		0.26	20.00	3.89	0.65	16.00	24.00	10.00	0.50	5.11	0.03

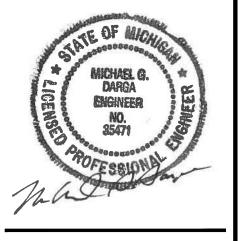


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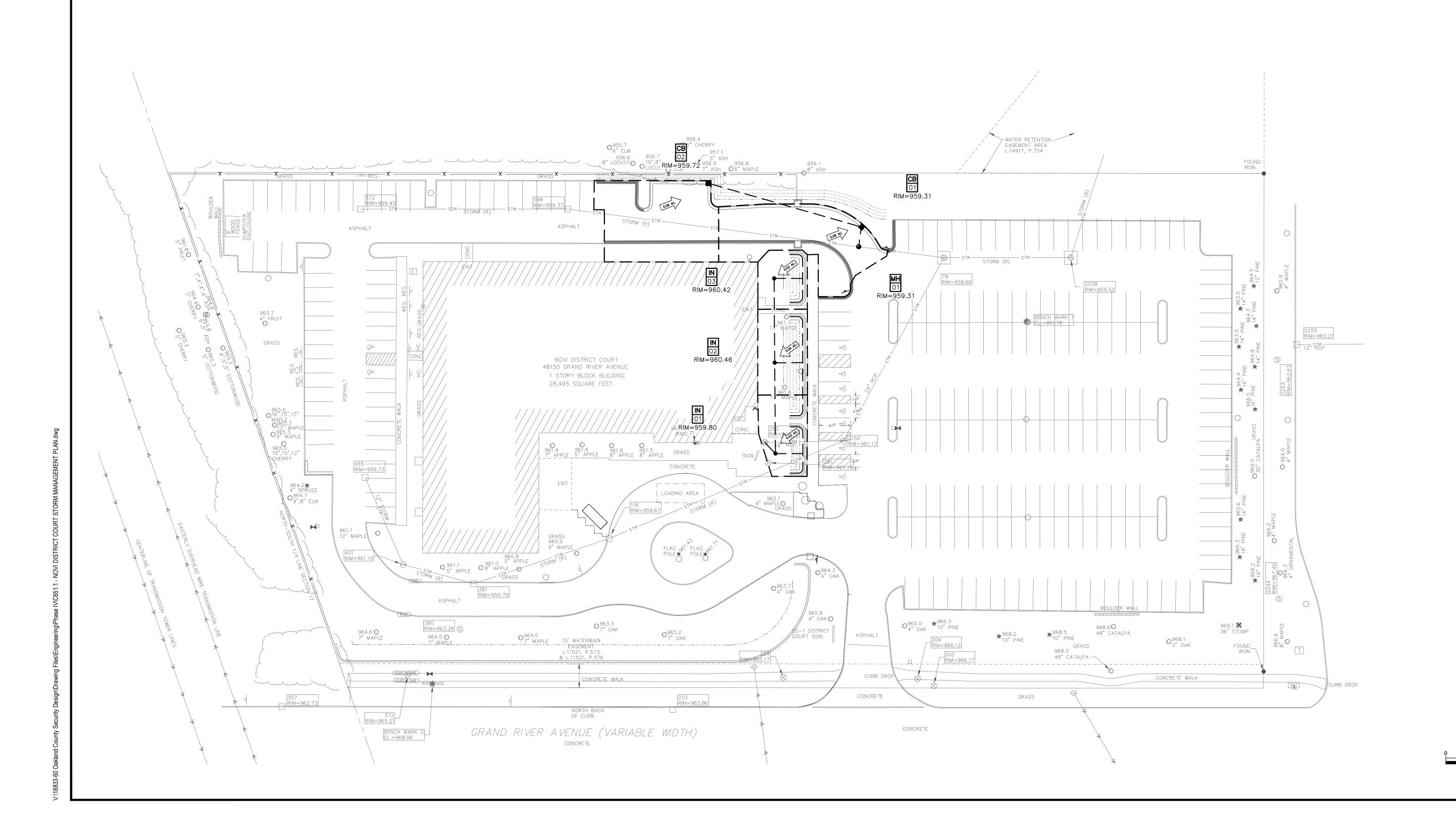
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Phase IV
Novi District Court
Storm Water
Management Plan
Oakland County Security Study

City of Novi Oakland County Michigan

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SCALE: 1" = 30'

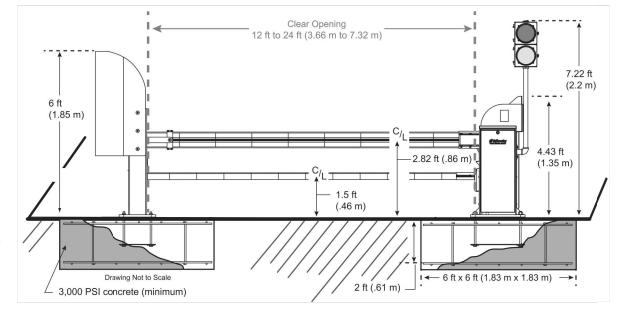


# Ultra Reliable **High Security**

Distributed by:

See the latest from HySecurity at www.hysecurity.com

Crash certified **StrongArm™ M30** barrier arm provides ultimate hardened security with unmatched user safety for the demanding reliability requirements of industrial, government and military users. HySecurity's unique dual arm design prevents a 15,000 lb (6.8 metric tons) truck or small passenger vehicle from penetrating a secure perimeter. Fast, continuous duty\* arm speed minimizes gate open time, and reduces traffic backup by moving more vehicles per hour through the access point. \* 100 cycles/hour



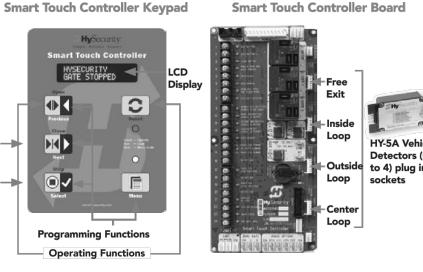
StrongArm M30 operator, barrier arm, and foundation dimensions

#### StrongArm (M30)™

Model	StrongArm M30
Crash Certified	ASTM F2656-07 M30-P1*
<b>Duty Cycle</b>	100 cycles/hr**, option for continuous duty
Horsepower	2 hp
Open/Close Time	6 to 8 seconds depending on arm length
Emergency Fast Close Time	5 to 7 seconds depending on arm length
Clear Opening	12 to 24 ft in 2 ft increments (366 to 732 cm in 61 cm increments)  Call for custom arm length
Ingress Protection	IP56
Temperature Rating	-40° to 158° F (-40° to 70° C) or -10° to 158° F (-23° to 70° C) using biodegradeable fluid.
1 Phase Power	208/230V, 60/50Hz
3 Phase Power	208/230V, 60/50Hz, 380/460V, 60/50Hz
Communication	RS-232, RS-485, Ethernet/fiber using optional HyNet™ Gateway accessory
User Controls	Smart Touch Controller with 70+ configurable options. Smart Touch keypad and display or a PC using S.T.A.R.T. software.
Relays	Three configurable user relays: one 30VDC, 3A solid state and two 250VAC, 10A electromechanical. Optional Hy8Relay™ for 8 additional relay outputs
Finish	Hot dipped galvanized standard. Optional textured yellow powder coat over zinc plating.
Foundation	6 x 6 x 2 ft (183 x 183 x 61 cm) or 4 ft <sup>3</sup> (122 cm <sup>3</sup> ) 3,000 psi concrete, #5 rebar, grade 60
Electrical Certification	Control panel certified to UL 508A by ETL
Warranty	5 year
UPS Backup Power	
AC Power Supply	StrongArm M30 w/Hylnverter AC

w/Hylnverter AC\*\*\* StrongArm M30 w/Hylnverter AC \*Contact HySecurity to receive a copy of the ASTM F2656-07 M30-P1 Test Certification.

\*\*ExtremeCycle option available \*\*\*The operator's normal duty cycle and the actual number of gate cycles available from battery depends upon gate resistance to travel, cycle length, battery size, state of charge and health, ambient temperature, accessory power draw and frequency of gate cycles during power outage.



#### **SMART TOUCH CONTROLLER**

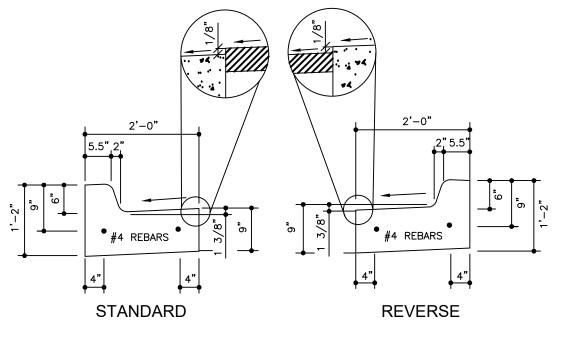
- Microprocessor-based (Non-PLC)
- 21 field configurable inputs
- 3 field configurable user relay outputs; Optional Hy8Relay™ provides eight additional programmable relay outputs
- 4 plug-in HY-5A vehicle detector sockets
- RS-232, RS-485 and HyNet<sup>™</sup> Gateway
- Date & time stamped fault logs, errors and security alerts ■ PC interface for easy configuration and quick troubleshooting using Smart Touch Analyze and Retrieve Tool (S.T.A.R.T.)

**SYSTEM DESIGN SUPPORT:** Contact HySecurity for CAD drawings, specifications, help with custom site requirements, installer referrals, and other technical support.



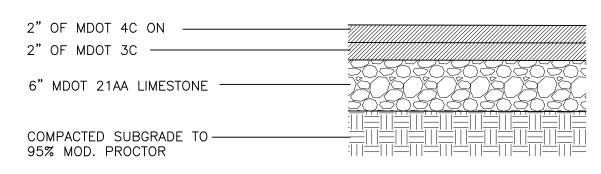
Contact HySecurity for an operator/parts distributor near you. phone **800-321-9947** | **253-867-3700** fax **888-321-9946** 

D0515 030716



USE MDOT 35P CONCRETE—TYPICAL ALL C&G. REFERENCE MDOT DETAIL II—30D TYPE F4.

# 24" CONCRETE CURB AND GUTTER



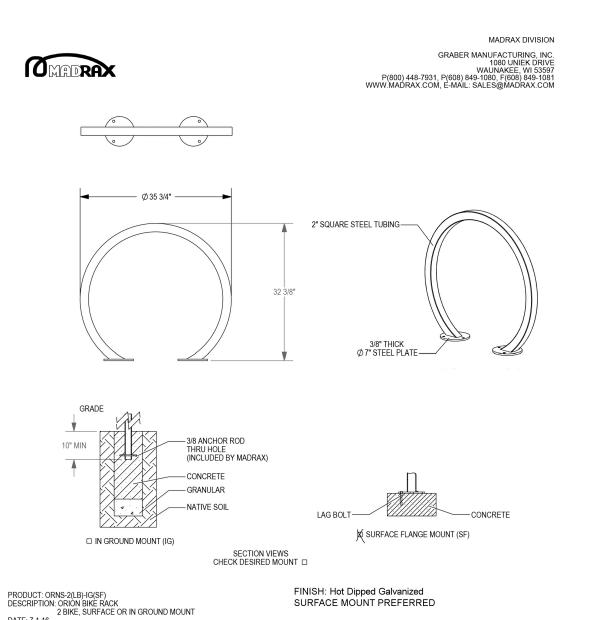
#### STANDARD DUTY PAVEMENT SECTION

1. IF ANY OF THE EXISTING BASE CANNOT BE UTILIZED, IT SHALL BE REMOVED AND REPLACED WITH MDOT 21AA MATERIAL.

2. THE PLACEMENT OF THE FINAL LIFT OF ASPHALT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION HAS BEEN COMPLETED, OR AS DIRECTED BY THE ENGINEER.

3. A BOND COAT OF SS-1H EMISSION SHALL BE APPLIED (AT A RATE OF 0.10 gal/syd)
BETWEEN THE LEVELING AND WEARING COURSE WHEN 48 HOURS HAVE ELAPSED BETWEEN PLACEMENT.

STANDARD DUTY PAVEMENT

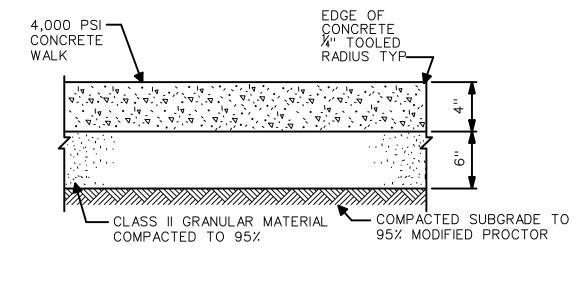


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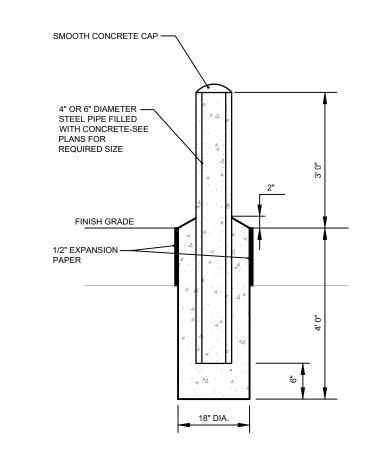
1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

2. CONSULTANT TO SELECT COLOR(FINISH), SEE MANUFACTURER'S SPECIFICATIONS.

3. SEE SITE PLAN FOR LOCATION OR CONSULT OWNER. ©2016 GRABER MANUFACTURING, INC. ALL PROPRIETARY RIGHTS RESERVED. **BIKE RACK - SURFACE MOUNTED** 

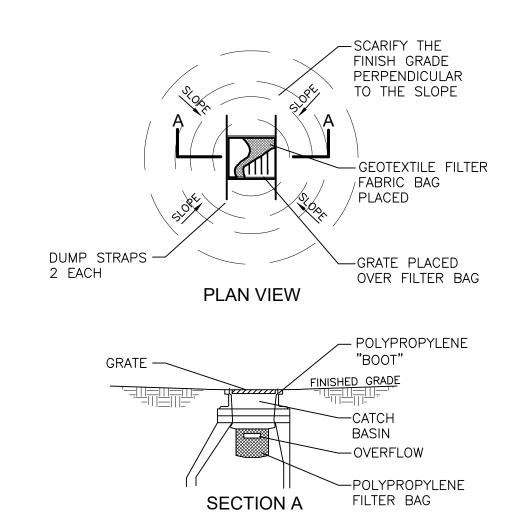


**CONCRETE WALK** 



1. USE GALVANIZED STEEL PIPE (2.0 oz ZINC per sft) WITH A MINIMUM ¾" WALL THICKNESS.
2. USE MDOT 35P CONCRETE.

**CONCRETE BOLLARD** 



TEMPORARY SEDIMENT INLET FILTER TO BE INSTALLED ON ALL PAVED CATCH BASINS OR STORM INLETS, OR AS SPECIFIED ON THE SOIL EROISON CONTROL PLAN. INLET FILTER TO BE SIMILAR TO "STEAMGUARD" AS MANUFACTURED BY STORMWATER SERVICES CORPORATION (206-767-0441) OR "SILTSACK" AS MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS, INC., (800-448-3636). CLEAN FILTER AS NEEDED, OR AS REQUIRED BY THE SOIL EROSION CONTROL

TEMPORARY SEDIMENT INLET FILTER



Surveyors Planners

Landscape Architects 28 West Adams Road Suite 1200

Detroit, MI 48226 p (313) 962-4442 f (313) 962-5068

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05.22.2017	Owner Review
06.08.2017	Owner Revision
07.07.2017	Site Plan Review
08.04.2017	ZBA Submittal
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Details

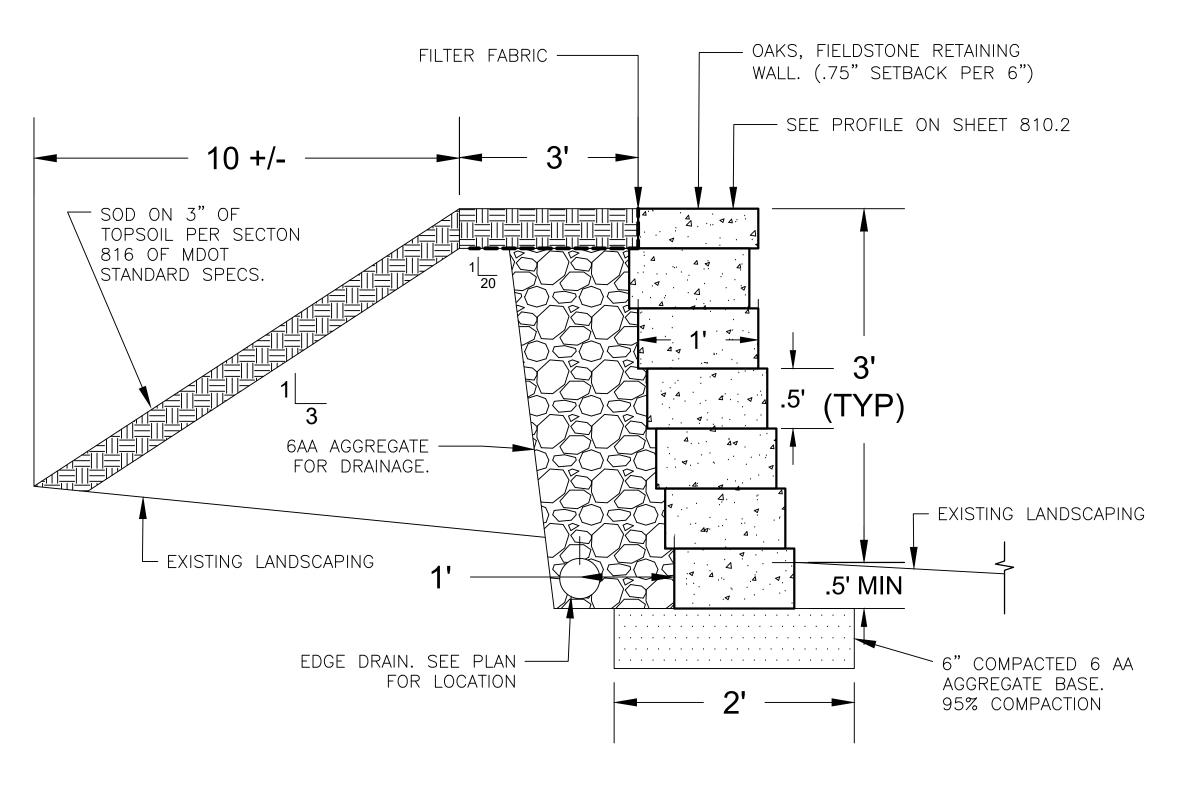
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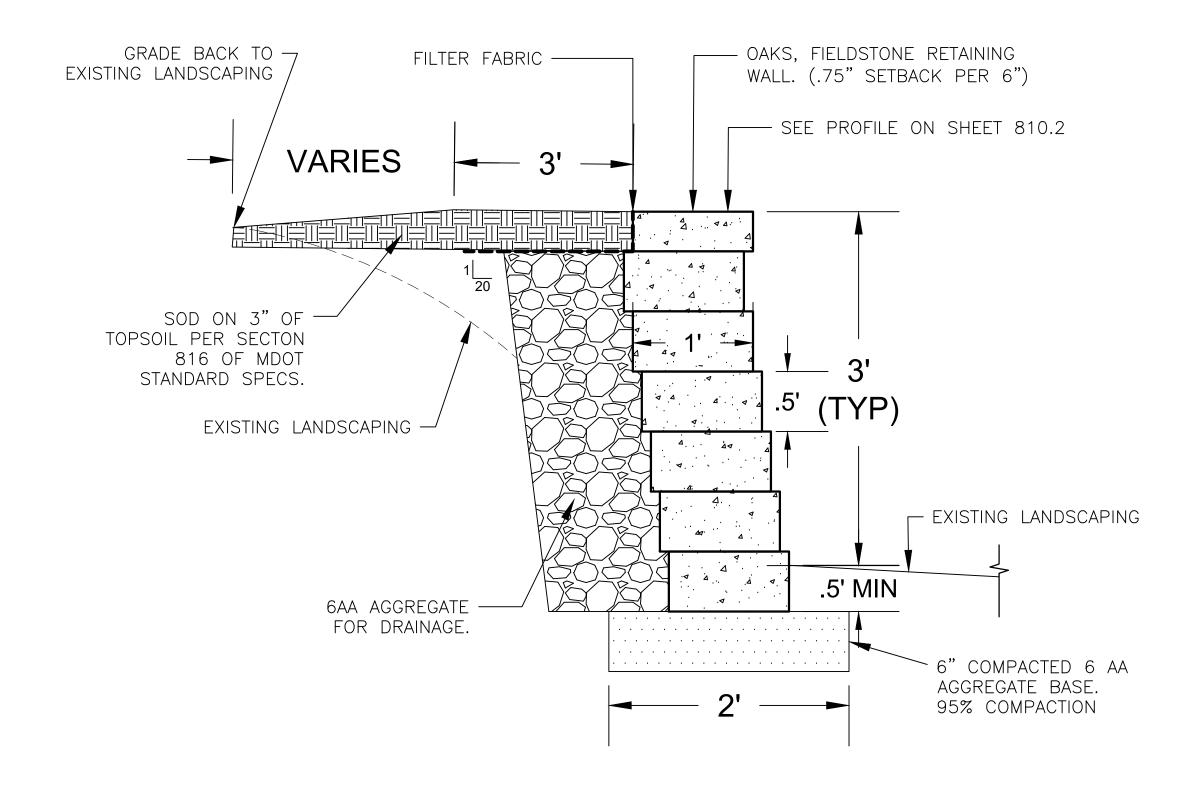
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Township of Waterford Oakland County Michigan

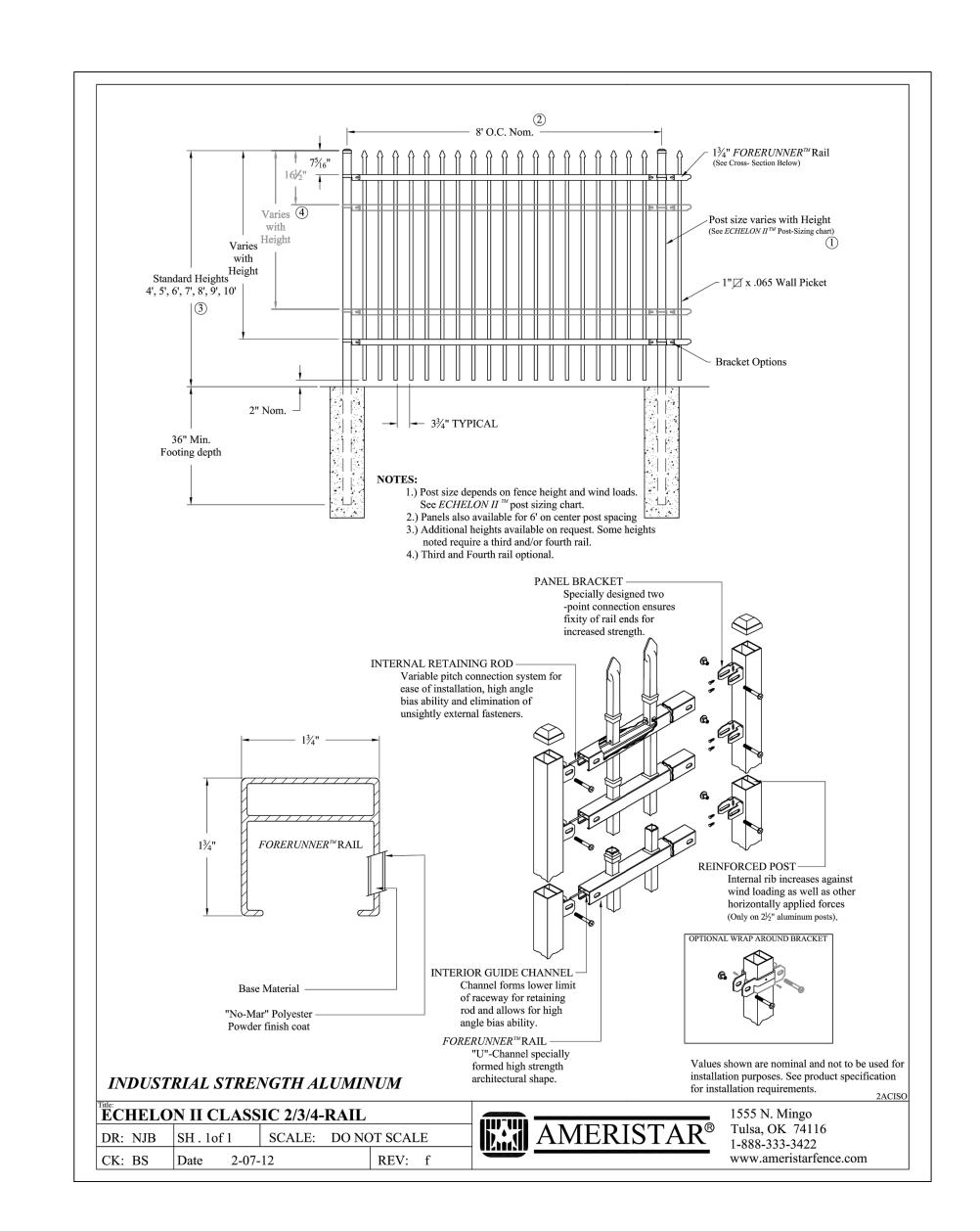
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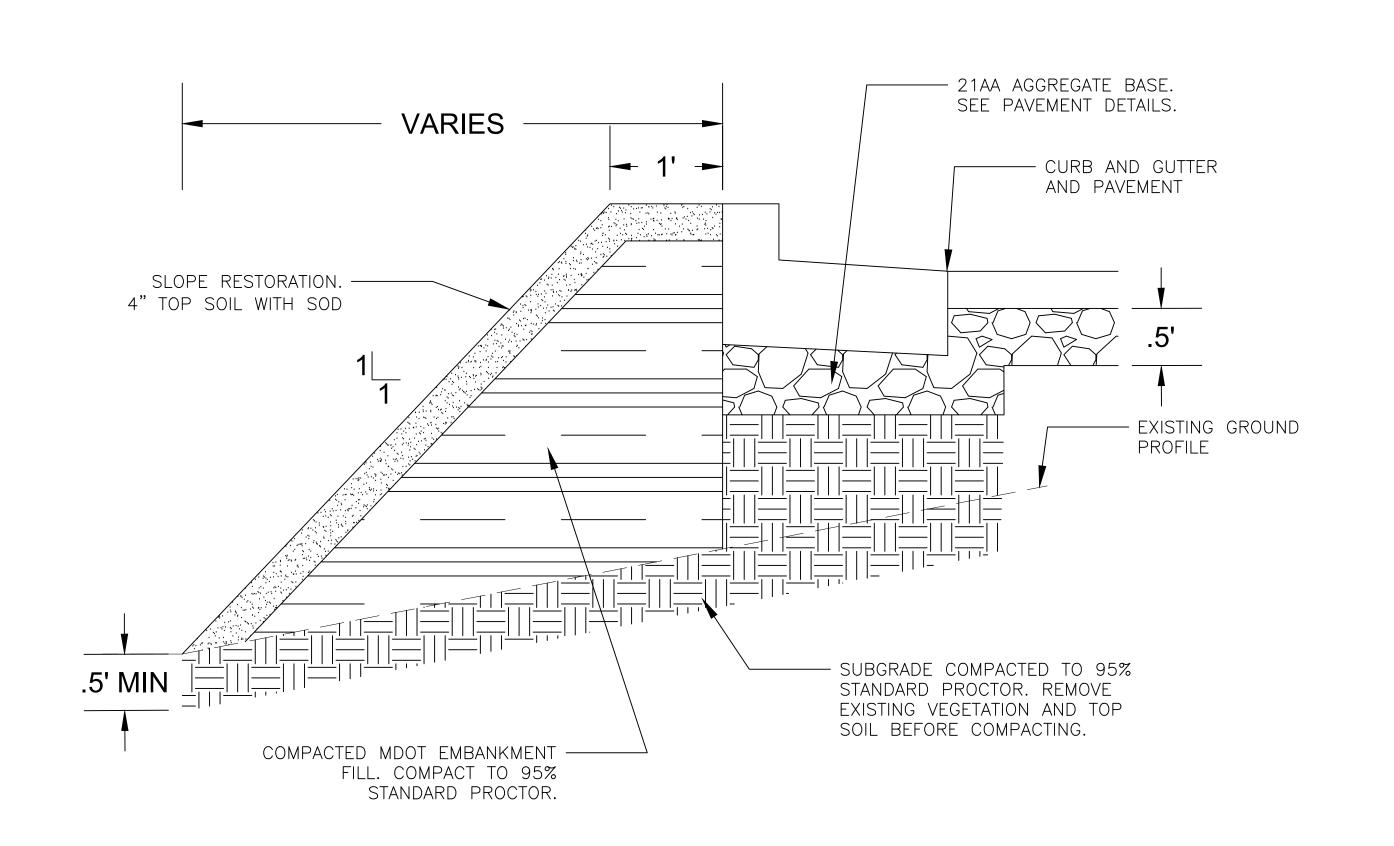




# RETAINING WALL - EAST ELEVATION N.T.S.







PARKING LOT EMBANKMENT

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Landscape Architects

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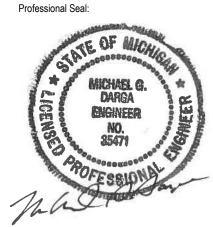
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Oakland County Facilities

Management

Planning & Engineering
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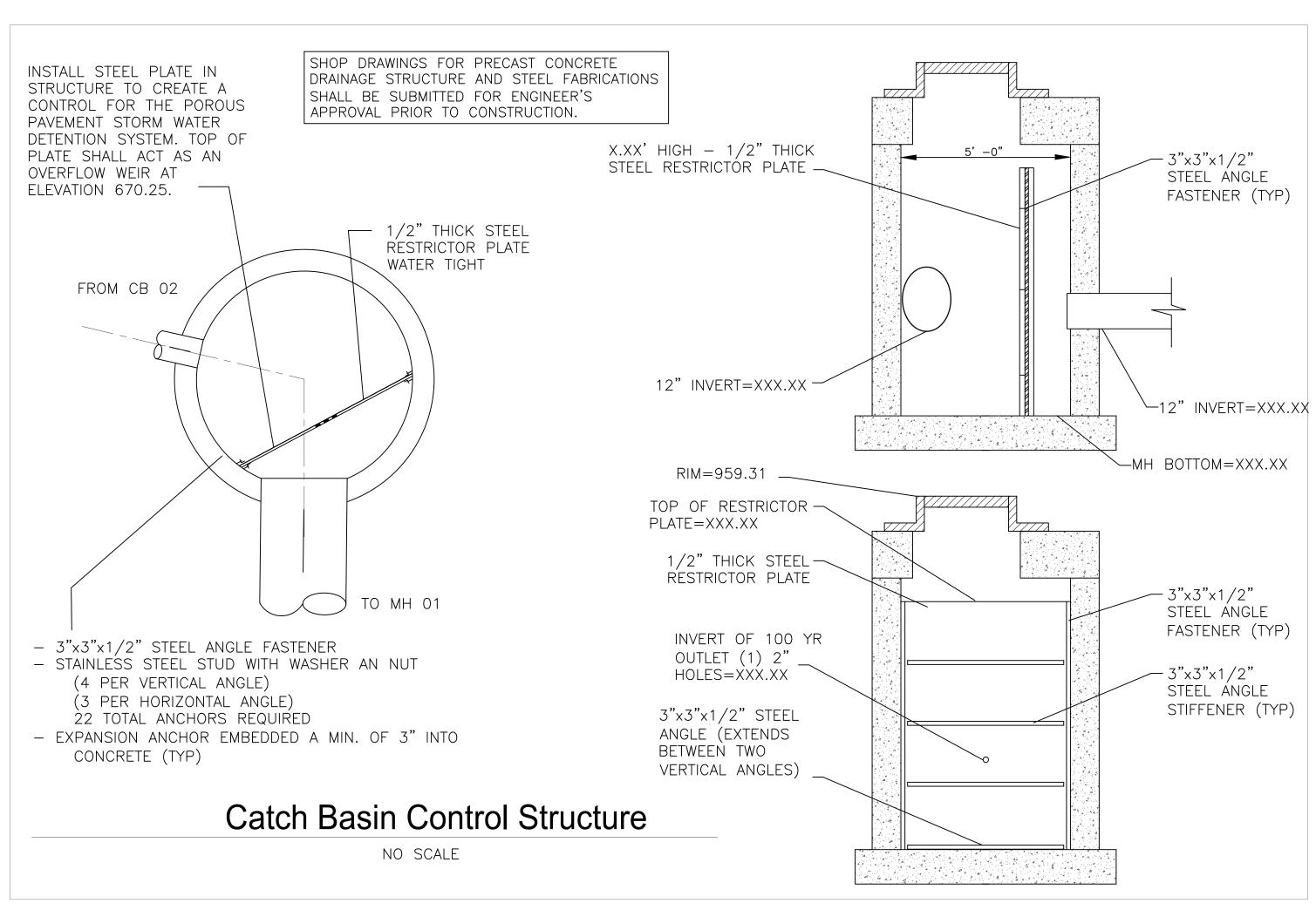
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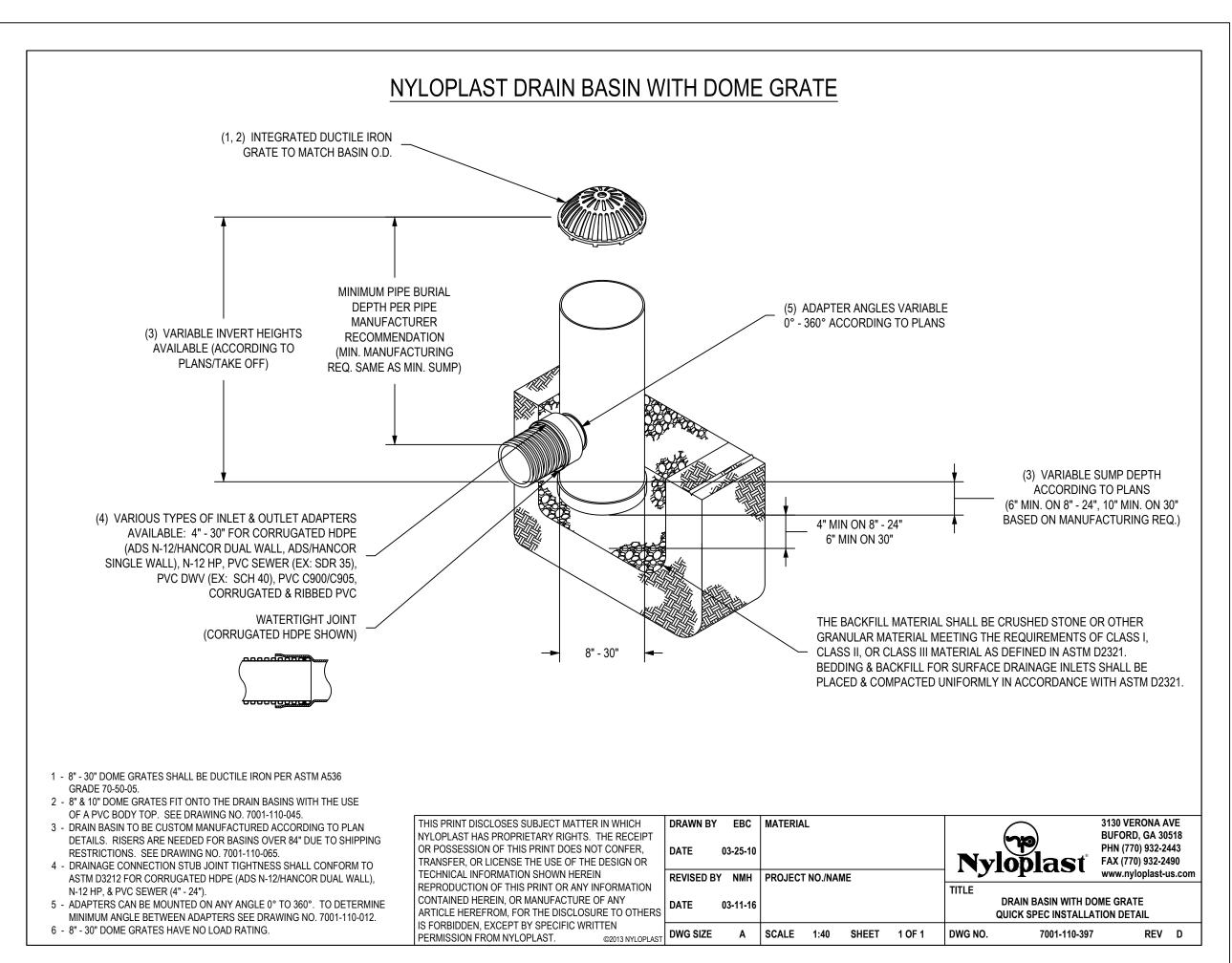
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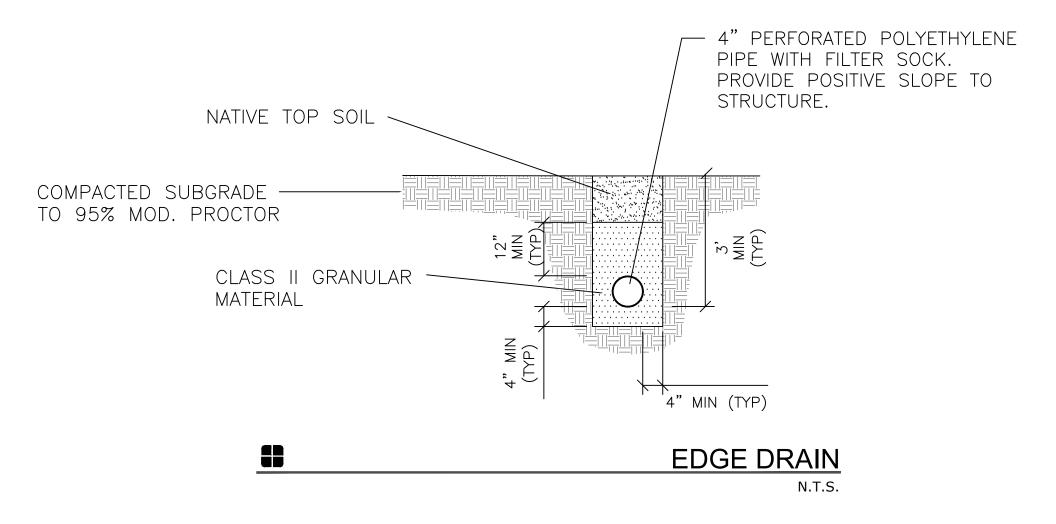
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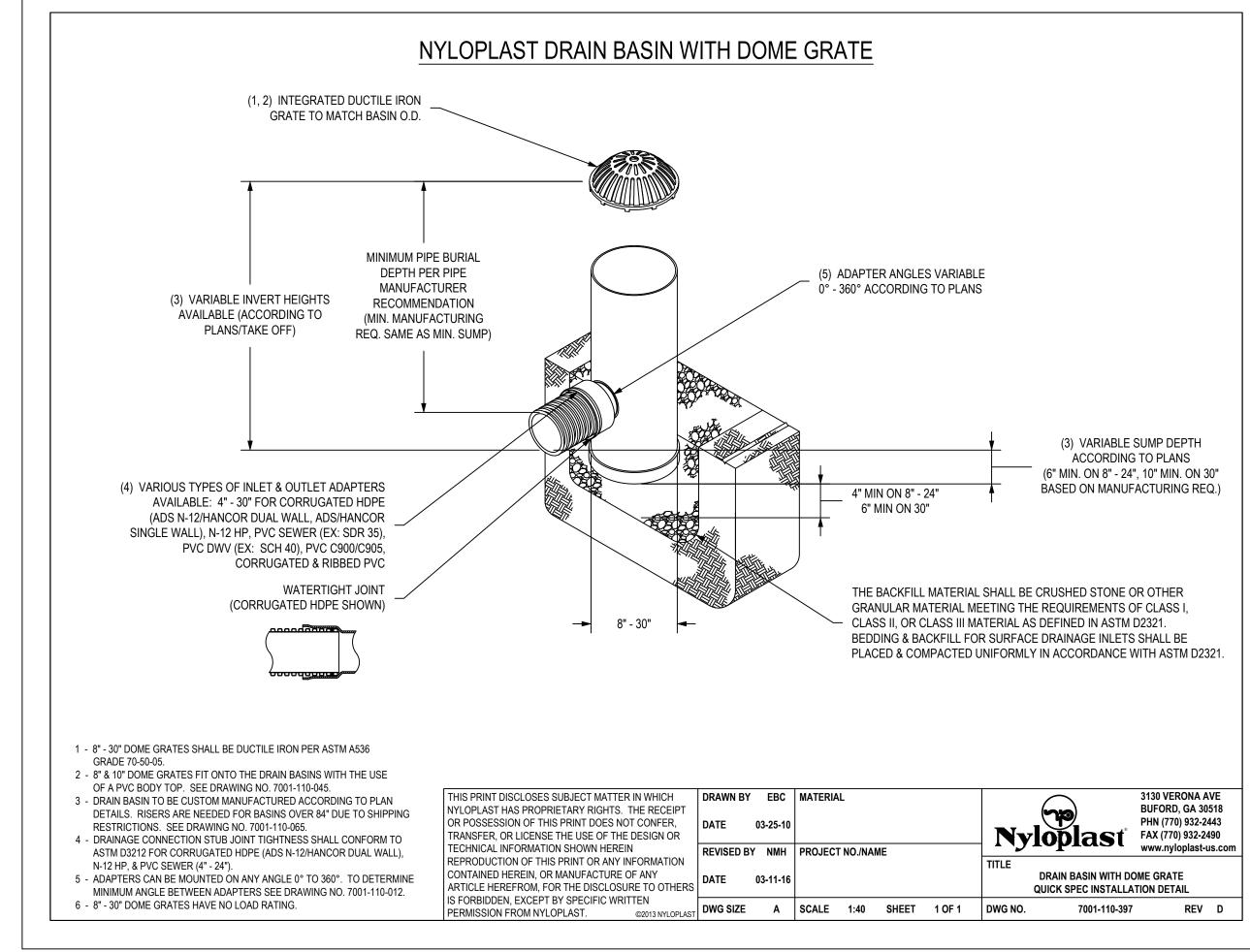
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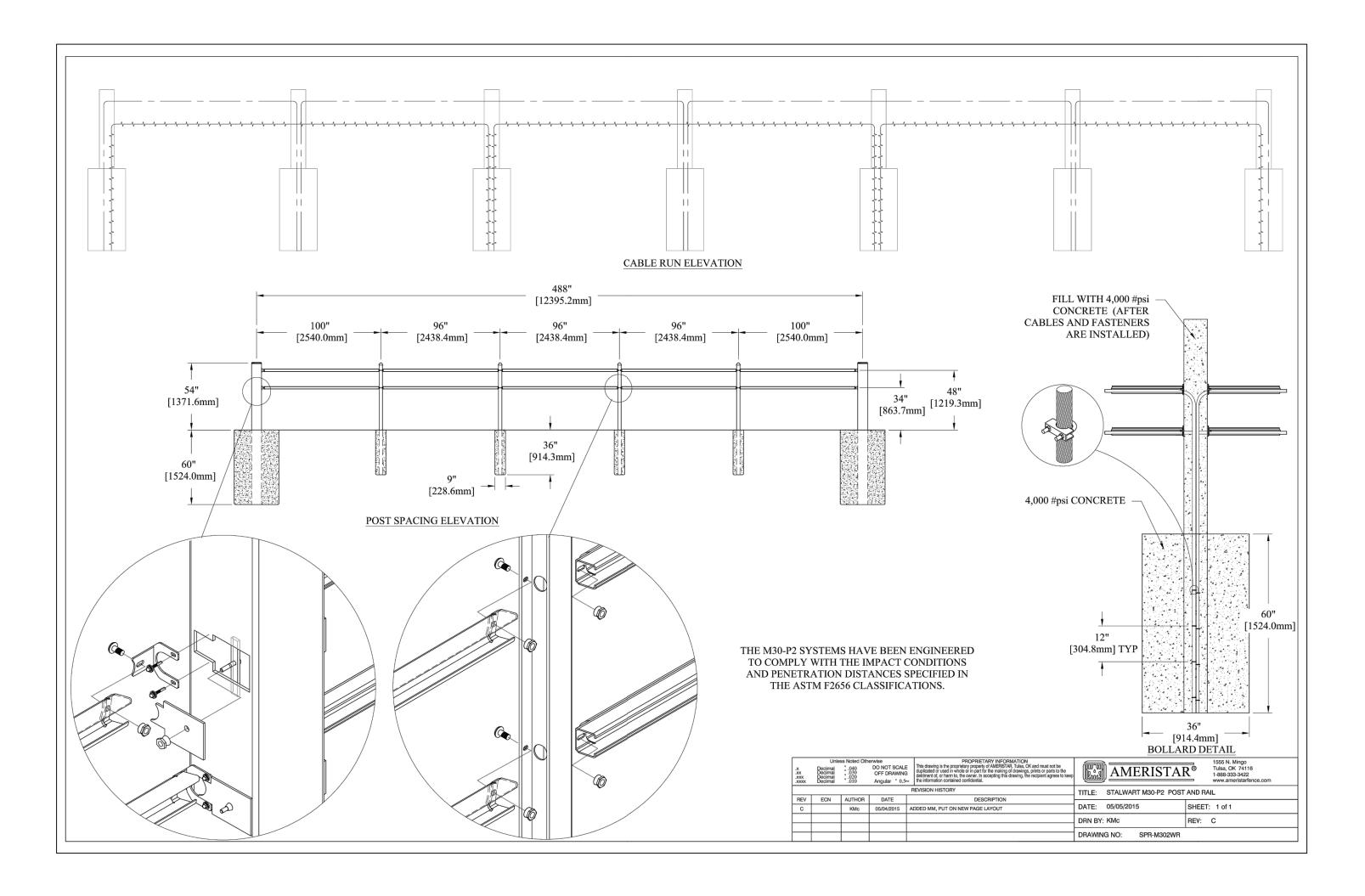
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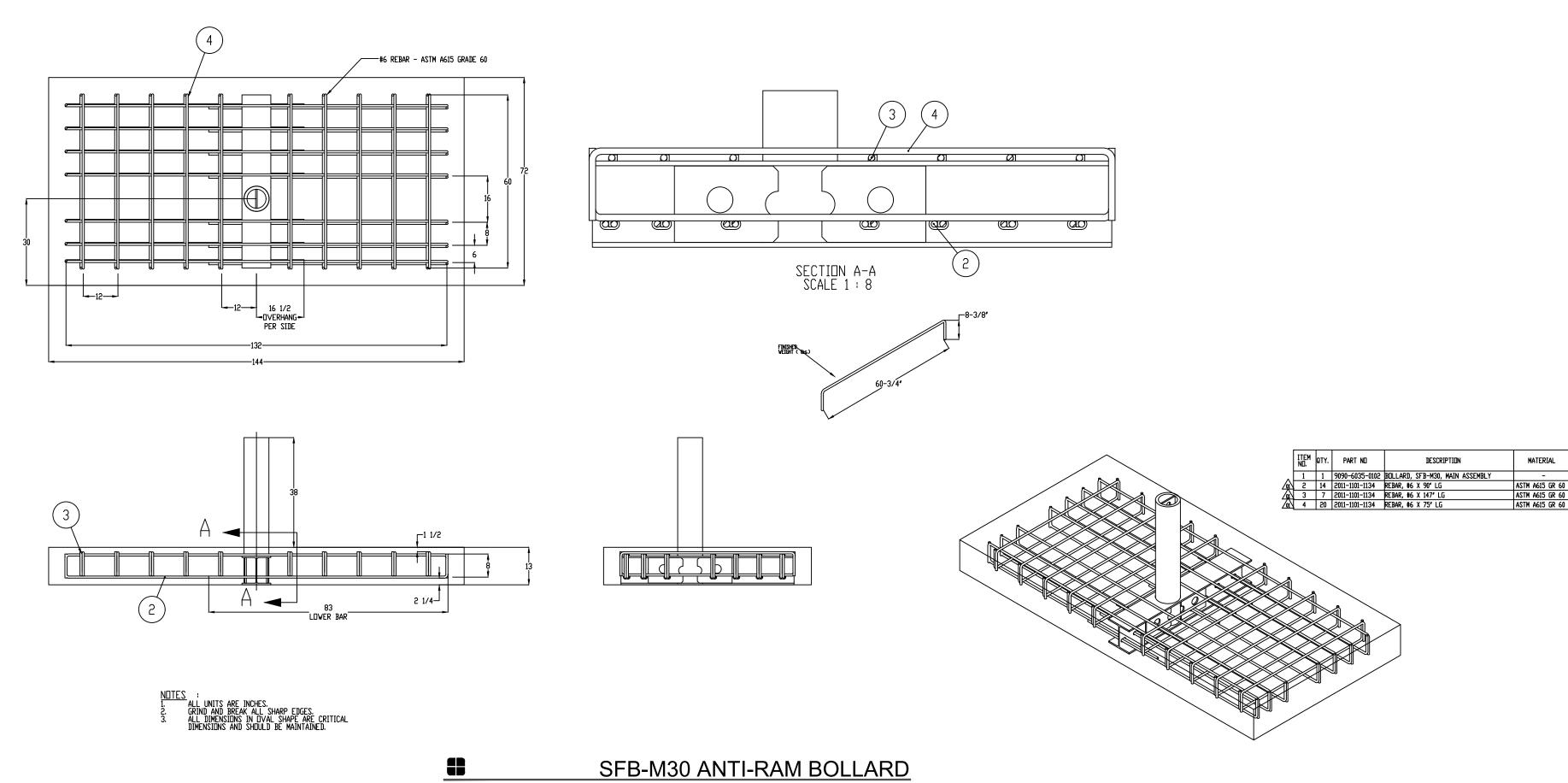
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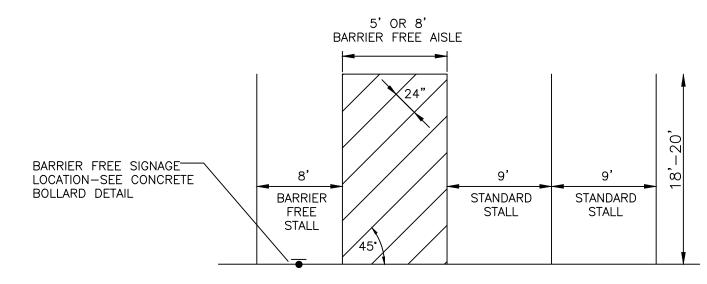
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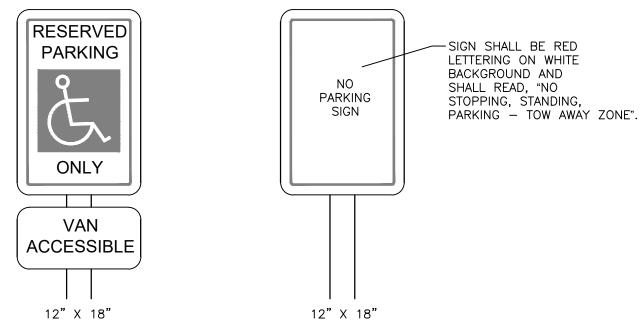






PAINT SHALL BE LIFE LINE YELLOW LY-1 OR B-1052, MANUFACTURED BY THE PRISMO SAFTEY CORPORATION, SHERWIN-WILLIAMS, PRO-MAR 5494, OR APPROVED EQUAL. ALL STRIPING SHALL BE FOUR INCHES (4") IN WIDTH PAINTED HIGHWAY YELLOW OR BLUE AS SPECIFIED ON PLANS AND IN SUPPLEMENTAL SPECS. ALL STRIPING SHALL BE APPLIED IN TWO (2) COATS.

# # PAVEMENT MARKINGS



NOTE:
1. REFER TO THE MMUTCD FOR OTHER SIGN DIMENSIONS.

1. BARRIER FREE PARKING SIGN SHALL CONFORM WITH CURRENT STATE AND LOCAL CODES AND REGULATIONS.
2. ALL REGULATORY AND TRAFFIC CONTROL SIGN SHALL COMPLY WITH MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), AND ANY OTHER APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS.

3. COORDINATE SIGN LOCATIONS WITH LANDSCAPING AS REQUIRED.
4. ALL REGULATORY SIGNS SHALL BE REFLECTORIZED OR ILLUSTRATED TO SHOW SAME SHAPE AND COLOR BOTH BY DAY AND BY NIGHT.

COLOR BOTH BY DAY AND BY NIGHT.

5. SIGN BACKING MATERIAL SHALL BE .080" ALUMINUM, UNLESS NOTED OR OTHERWISE REGULATED.

6. ILLUMINATED SIGNS SHALL BE U.L. LISTED OR APPROVED EQUIVALENT.

7. REGULATORY SIGN POSTS AND SIGN BACKS TO BE PAINTED WITH A SEMI—GLOSS ALIPHATIC ACRYLIC

POLYURETHANE TO MATCH PMS BLACK 6C2X.

8. ALL SIGNS INSTALLATION SHALL FOLLOW THE MANUFACTURER'S INSTRUCTIONS AND AS INDICATED BY THESE PLANS.

9. DRIVE ANCHOR POST AND ANCHOR SLEEVE INTO THE GROUND TOGETHER, LEAVING A MAX. OF ONE HOLE EXPOSED FOR BOLT CONNECTION. FOR HAND INSTALLATION, DRIVE CAP OF PROPER SIZE SHALL BE USED TO PREVENT DAMAGE TO TUBING. SIDEWALK SHALL BE POURED AROUND ANCHOR SLEEVE OR

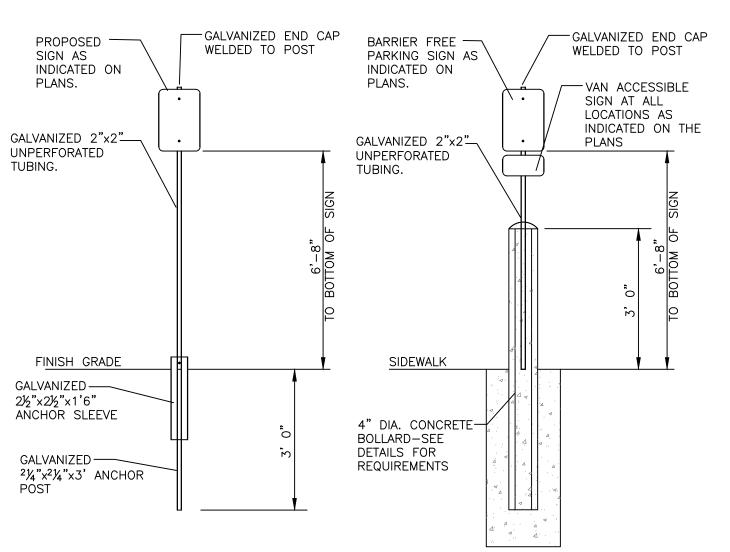
USED TO PREVENT DAMAGE TO TUBING. SIDEWALK SHALL BE POURED AROUND ANCHOR SLEEVE OR EXISTING SIDEWALK SHALL BE CORE DRILLED AND SEALED AROUND THE SLEEVE.

10. INSERT SIGN POST INTO ANCHOR ASSEMBLY APPROXIMATELY 6" TO 8" AND BOLT IN PLACE.

11. INSTALLED SIGN AND POST SHALL BE PLUMB AND FREE OF VERTICAL AND LATERAL MOVEMENT.

12. ALL TUBING SHALL BE #12 U.S. STD. GAGE WALL THICKNESS.

# PARKING SIGNAGE N.T.S.



NON-PAVED AREAS PAVED AREAS

SEE PARKING SIGNAGE DETAIL FOR ADDITIONAL REQUIREMENTS.
 BARRIER FREE SIGNS SHALL BE MOUNTED IN BOTH DIRECTIONS ON ONE POST WHERE BARRIER FREE SPACES FACE EACH OTHER.
 SIGNS SHALL BE MOUNTED TO POST WITH UNIVERSAL DRIVE RIVETS THROUGH PRE—DRILLED

 $\%_6$ " DIAMETER HOLES IN THE SIGN FACE AND POST.

4. SIGN POST, ANCHOR POST AND ANCHOR SLEEVE SHALL BE SECURED WITH  $\%_6$ " DIAMETER GALVANIZED BOLTS, WITH LOCK—WASHERS AND NUTS, THROUGH PRE—DRILLED  $\%_6$ " HOLES.

SIGNAGE INSTALLATION
N.T.S.

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Engineers
Surveyors
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Landscape Architects
28 West Adams Road

Suite 1200

Detroit, MI 48226

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Proiect:	18833.60

# LOCATION MAP ( NOT TO SCALE )

XX PERIMETER & INTERIOR LANDSCAPE PLANT LIST:

XX TREES:

NO. SYMBOL COMMON NAME

6 RB Heritage River Birch

No existing trees on site will be saved.

There are no regulated woodlands on site.

PROJECTED LANDSCAPE COST

"TWO-YEAR IRRIGATION REQUIREMENT PERIOD"

LANDSCAPE CONTRACTOR'S

irrigation maintenance schedule for their use.

seedlings under this two-year Irrigation Requirement Period.

WORK ACTIVITY	QUANTITY	UNIT	UNIT PRICE	TOTAL
LANDSCAPING				
Seed, MDOT Class 'A'	510	SY	\$3.00	\$1,530.00
Seed, Steep Slopes	213	SY	\$8.00	\$1,704.00
Deciduous Trees, 3" cal	6	EA	\$400.00	\$2,400.00
Mulch	2	CY	\$35.00	\$70.00
	TOTA	۸L		\$5,704.00

It shall be the responsibility of the landscape contractor to program and periodically adjust the irrigation system (provided by others) as required to ensure delivery of proper and adequate water supply to all

establishment of healthy plant material and lawn for their first year of growth. Following the landscape

Landscape Contractor will sufficiently water all plant material located in the Detention Basin that is not

irrigated through an automatic system to establish healthy root systems of the shrubs, plugs, and

contractor's two-year irrigation requirement period, the contractor shall provide the owner with suggested

plant material, and seeded lawn areas serviced by the same irrigation system, to ensure the

1 1/2" CAL., 3-5 Multi-stem, B&B • No berm is provided along the R.O.W. sidewalk because the site is generally at least 2 feet below the sidewalk. A hedge is provided as screening of the parking lot. A waiver of this requirement is requested of the Planning Commission.

BOTANICAL NAME BETULA NIGRA 'HERITAGE'

#### LANDSCAPE CALCULATIONS

1) Perimeter Parking Landscape Requirements One Canopy Tree per 35 If Parking Lot perimeter = 195 If 195 lf / 35 = 6 trees (**6 trees provided**)

## **PLANT NOTES:**

STAKE TREES JUST BELOW FIRST BRANCH USING 2-3" WIDE

USE 3 HAROWOOD STAKES PER TREE. 2° X 2° X 30° STAKES. DRIVE STAKES INTO UNDISTURBED SOIL 6-8° OUTSIDE

....MULCH 4° DEPTH WITH SHREDDED HARDWOOD BARK. MULCH SHALL DE NATURAL IN COLOR. LEAVE 3° CIRCLE OF BARE SOIL AT BASE OF TREE TRUNK.

-REMOVE ALL NON-BIODEGRADABLE MATERIALS FROM THE ROOTBALL. CUT DOWN WIRE BASKET AND FOLD DOWN ALL BURLAP FROM TOP 1/3 OF ROOTBALL.

OF ROOTBALL TO A DEPTH OF 18° BELOW TREE PIT REMOVE AFTER ONE YEAR. OO NOT USE WIRE OR ROPE THROUGH A HOSE.

BELT-LIKE NYLON OR PLASTIC STRAPS. CONNECT FROM TREE TO STAKE OPPOSITE. ALLOW FOR SOME FLEXING OF THE TREE.

TREE WRAP SECURE WITH BIODEGRADABLE MATERIAL

AT TOP \$ BOTTOM. REMOVE AFTER FIRST WINTER.

MOUND TO FORM TREE SAUCER

AMEND SOIL PER SITE CONDITIONS AND REQUIREMENTS OF PLANTS.

TREE PIT 3 X ROOTBALL WIDTH

NOTES:

I.TREE SHALL BEAR SAME RELATION TO FINISH

2.00 NOT PRUNE TERMINAL LEADER. PRUNE ONLY DEAD OR BROKEN BRANCHES.

THAT ARE UNSIGHTLY AND COULD CAUSE

3. REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS

OECIDUOUS TREE DETAIL

GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 6" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.

SCARIFY SUBGRADE AND PLANTING PIT SIDES TO 4" DEPTH.

- 1. Plant materials shall be sound, heathy vigorous, free from plant diseases and insects or their eggs, and shall have normal, healthy root systems. Caliper measurements shall be taken 6: above the ground level. All other measurements shall be in accordance with the latest edition of "American Standard for Nursery Stock" (ANSI Z-60.1 + A3002004.)
- 2. Planting bed soil for annuals shall be screened topsoil. To deter weed growth during the establishment of annual, & perennial bed, apply a pre-emergent ('Preen' or equal) after planting 2-3 times per growing season, at a rate per recommendation of product manufacturer.
- 3. Planting pockets shall be no deeper than the height of the root ball, saucer shall be made on the edges of the plant pocket.
- 4. All tree wrap shall be removed upon planting. 5. Mulch shall be shredded hardwood bark natural in color, free from deleterious materials 12. Plant materials shall be planted within the annual planting window of March 15-Nov 15. and suitable as a top dressing of planting beds and individual tree plantings. Trees shall be mulched with minimum of 4" deep hardwood bark mulch.
- Grass seed shall be certified turf grass seed complying with A.S.P.A. specifications, and free of weed seeds and undesirable native grasses. Seeded areas shall not be permitted to dry out. All lawn areas shall be fertilized and watered as required during the first growing season to maintain a dense and vigorous growing lawn.
- Plants shall be guaranteed for two complete growing seasons (24 months). Dead material shall be replaced as needed prior to the expiration of the guarantee period, in accordance with the local ordinance requirements.
- 9. Contractor shall provide in writing a list of recommended maintenance proceedures for the first two (2) growing seasons.
- 10. Remove top  $\frac{1}{3}$  of burlap on root ball or all if wrapped in plastic covering and/or nylon Plant materials shall be used in compliance with the provisions of the local ordinance and shall be nursery grown, free of pests and diseases, hardy in this county, in conformance with the standards of the American Association of Nurserymen, and
- materials shall be northern grown, No. 1 grade. 13. Any plant substitutions must be approved in writing by the City prior to installation.

shall have passed inspections required under state regulations. In addition, plant

Engineers Surveyors Planners

Landscape Architects

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Executive:	STC
Manager:	MGD
Designer:	AFP
Quality Control:	STC
Section:	17

T-01-N R-08-E

Professional Seal:



# **LAWN SEED MIX:**

**STEEP SLOPES MIX:** 

25% Trifolium hybridum (Alsike Clover)

30% Lolium multiflorum (Annual Ryegrass)

25% Lotus corniculatus, 'Empire' (Bird's Foot Trefoil, 'Empire')

30% PERENNIAL RYGRASS 20% PARK KENTUCKY BLUEGRASS 45% CREEPING RED FESCUE 5% ANNUAL RYEGRASS 4#/1000 S.F. SEEDING RATE



**PRELIMINARY** 

DATE:	ISSUE:
7.07.2017	Site Plan Review

1. All Construction shall conform to the current standards and specifications of local ordinances. 2. All areas not built, landscaped, or paved upon shall be

- seeded or sodded. Terra seed system or approved equal is encouraged. 3. All lawn areas shall be irrigated with an underground
- automatic irrigation system. Irrigation heads shall be placed such that water will not hit any hard surfaces or
- 4. Two (2) year guarantee period begins at Final Acceptance of landscape material by the City's representative, a landscape architect, and prior to the authorization of the occupancy permit. This is the first of two (1 of 2) required
- City inspections of the Landscape Plan installation. 5. A minimum of one cultivation in each month of June, July, and August shall be performed within the 2-year warranty
- 6. Building Department will not release construction bonds until City landscape architect has inspected the site and approved the installation of landscape plans. Final bond will not be released until the two (2) year guarantee expires and final inspection is made.
- 7. Owner is then responsible for care and maintenance of all plants upon return of bonds. All plant material is to be maintained for the natural life of the plant. No removal of any plants material is permitted without replacement.

SCALE: 1" = 30'

8. Detention Basin plant material shall be sufficiently watered as needed to establish growth and heartiness.



Phase IV **Novi District Court** Landscape Plan

Oakland County Security Study

City of Novi Oakland County Michigan

05.08.2017 Scale: 1"=30' L550.1 Sheet: Project: 18833.60

