

NORTHFIELD TOWNSHIP PLANNING COMMISSION
NOTICE OF REGULAR MEETING
April 15, 2015 at 7:00 p.m.
Second Floor, Public Safety Building
8350 Main Street, Whitmore Lake, MI 48189

AGENDA

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. APPROVAL OF AGENDA
5. CALL TO THE PUBLIC
6. CORRESPONDENCE
7. REPORTS
 - A. Board of Trustees Report
 - B. ZBA
 - C. Staff Report
 - D. Planning Consultant Report
8. PUBLIC HEARINGS
9. OLD BUSINESS
 - A. Case #JPC140003 – Approve, approve with conditions, or deny the request of Nowatzke Truck & Trailer, Inc., 6900 Whitmore Lake Road, Whitmore Lake, MI 48189 for site plan approval for a convenience store and gasoline/diesel fueling station. The parcel number is B-02-20-300-036 and is zoned GC – General Commercial.
 - B. Master Plan/Citizen Survey – review of bids received
10. NEW BUSINESS
11. MINUTES: April 1, 2015 Regular Meeting
12. POLICY REVIEW AND DISCUSSION
13. CALL TO THE PUBLIC
14. COMMENTS FROM THE COMMISSIONERS
15. ANNOUNCEMENT: Next Regular Meeting – May 6, 2015
16. ADJOURNMENT

This notice is posted in compliance with PA 267 Of 1976 as amended (open meetings act) MCLA 41.7.2A (2) (3) and the Americans with Disabilities Act. (ADA) Individuals with disabilities requiring auxiliary aids or services should contact the Northfield Township Office. (734) 449-5000 seven days in advance.

8350 Main Street, Whitmore Lake, MI 48189-0576
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CARLISLE

WORTMAN

associates, inc.

605 S. Main Street, Ste. 1
Ann Arbor, MI 48104
(734) 662-2200
(734) 662-1935 Fax

Date: October 28, 2014
Revised: December 10, 2014
January 30, 2015
March 20, 2015

Site Plan Review
For
Northfield Township, Michigan

Applicant: Damrath Group, LLC – John Damrath
Project Name: Nowatzke Truck + Trailer, Inc. Fuel Center
Plan Date: October 10, 2014
Revised Plan Date: March 6, 2015
Location: 6900 Whitmore Lake Road (B-02-20-300-036)
Zoning: GC, General Commercial
Action Requested: Site Plan Approval.
Required Information: Deficiencies are noted in the sections below.

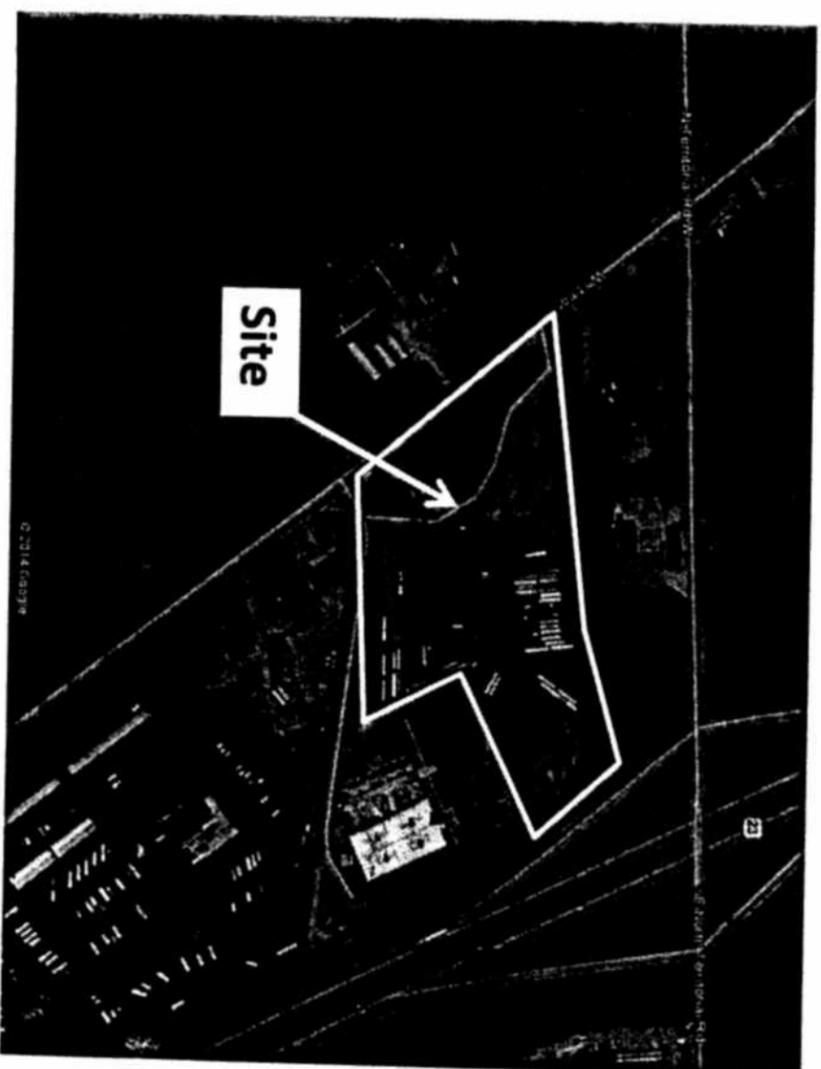
PROJECT AND SITE DESCRIPTION

The applicant proposes to construct a new 2,285 square foot convenience store (as a renovation within the existing building), four (4) gasoline dispensers with canopy and three (3) diesel fuel dispensers with canopy.

Automotive service station, including minor repair services is listed as a conditional use in the GC, General Commercial zoning district. The applicant received a recommendation of Planning Commission approval for the conditional use request, and conditional use approval by the Township Board on September 23, 2014 with the following conditions of approval:

1. The traffic impact study be reviewed and approved by the County Road Commission as a part of the detailed site plan review process. (WCRC approved the Traffic Study – see letter from WCRC dated January 7, 2015.)
2. The applicant apply for full (detailed) site plan review.
3. Items 1 through 7 listed in the Engineer's August 13, 2014 letter be addressed as a part of the detailed site plan review process and noted as such by Orchard, Hiltz and McCliment. (See Engineer's review.)
4. Any non-conformities on the existing site be remediated according to the zoning ordinance. (Applicant is working through non-conformities with the building inspector.)

Figure 1. - Aerial Photograph



AREA, WIDTH, HEIGHT, SETBACKS

The dimensional requirements of the GC, General Commercial district are noted on the following page;

	<u>Required</u>	<u>Provided</u>	<u>Compliant</u>
Lot Area	10,000 sq.ft. (with sanitary sewer)	7.28 acres	Complies
Lot Width	80 feet (with sanitary sewer)	approx. 455 feet	Complies
Setbacks			
Front	35 feet	80 feet to proposed canopy	Complies
Side	20 feet	45 feet to existing building (south) 123 feet to proposed canopy (north)	Complies
Rear	20 feet	110 feet to existing building	Complies
Lot Coverage	25%	41.28% - existing	Existing non-conformity
Building Height	45 feet	18 feet – canopy Convenience store height existing condition (renovation to existing structure)	Complies

Building setbacks were scale measured as distance to buildings and other site features have not been dimensioned. Scaled elevation drawings of the proposed convenience store have been included in the plan set.

Items to be Addressed: None.

NATURAL RESOURCES

The proposed site is currently built and contains a paved surface in the locations where the proposed convenience store and gasoline/diesel pumps and canopies will be constructed. No natural resources will be compromised in the construction of the proposed uses.

Further, the underground storage tank location is noted north of the proposed gasoline canopy area. An Underground Storage Tank Plan Review Report conducted by MDEQ has been included in the applicant's latest submittal indicating no major deficiencies have been noted. Tank detail sheets (T-300 and T-301) have been provided as requested. Permits will be required prior to Final Zoning Compliance and Certificate of Occupancy.

Items to be Addressed: Underground storage tank permits will be required prior to Final Zoning Compliance and Certificate of Occupancy.

BUILDING LOCATION AND SITE ARRANGEMENT

As noted above, the proposed building location is acceptable and meets ordinance standards. The proposed location of the fuel canopies appears logical in relation to the rest of the site. In our previous review, we questioned whether the distance between the diesel pump canopy and the adjacent parking spaces allows adequate maneuverability for vehicles. The applicant

has demonstrated truck maneuverability north of the convenience store, and demonstrated an 18-foot aisle width as required.

Further trailer storage and display is not depicted on the eastern portion of the property adjacent to US-23, and should not be allowed within or adjacent to the detention basin area. Note B-6 on Sheet C-100 indicates vehicles within the detention area will be relocated to appropriate parking areas. We had recommended previously that the detention basin be planted with native wetland plantings. The applicant's cover letter indicates a note has been added to Sheet L-100 describing native wetland plantings in the detention pond, which provides for a native seed mixture to be applied.

Items to be addressed: None.

PARKING, LOADING

Section 61.04 outlines off-street parking requirements for various uses. The most similar use to the existing trailer repair facility listed in the parking requirements is "automobile service stations". In addition to the parking required for the existing trailer repair facility, the proposed convenience store parking requirement is noted under "general retail sales establishments, not elsewhere classified". The following table demonstrates both the proposed and required parking for the uses on the site:

	Required	Total Parking Provided
Retail (1 per 200 s.f. - 2,285 s.f. / 200 = 12 spaces)		
Auto Service Station (1 per 800 s.f. + 1 per 4 employees + 5 per each service bay = (21,288.7 s.f./800)=27 + 2 +30 =	59	46
Barrier Free	2	2

Based upon the required parking calculations, the uses on site require 59 parking spaces, thirty-eight (38) automobile spaces are provided, and an additional 41 truck stalls. Section 61.03 G. allows for a reduction in parking when a parking lot serves two (2) or more uses where the operating hours of the uses do not overlap.

The applicant has provided the hours of operation for the convenience store will be 24 hours and the trailer repair business will operate from 8AM to 8PM. The applicant indicates further while the two (2) uses will be utilized on the same property, they will not interact with one another or have the need to "share" parking spaces.

Two (2) barrier-free parking spaces have been provided as required.

Items to be addressed: None.

SITE ACCESS AND CIRCULATION

As provided in the conditional use review information, the site plan demonstrates a left turn lane at the north driveway as recommended in the traffic impact assessment study produced by Fleis + Vandenbrink. Review and approval of the traffic impact assessment and the associated improvements to Whitmore Lake Road has been approved by the WCRC (approved at their March 3, 2015 meeting).

The Sheet C-200 provides the boundary survey of the site, and calls out the various easements within the subject parcel. It notes the location of the recorded easement agreement for the ingress, egress, utilities, signs and drainage at the Washtenaw County Registrar of Deeds. A copy of the easement document has been provided for review.

Sheet C-202 demonstrates truck turning radii throughout the site. We note the circulation path demonstrates trucks will be traversing upon existing paved surfaces within the site.

Items to be addressed: None.

LANDSCAPING

A separate landscape plan is required to demonstrate that the existing landscape material meets current standards. A signed and sealed landscape plan has been provided as part of the submitted plan set.

One (1) tree per each 8 parking spaces is required. Thirteen (13) parking spaces are proposed adjacent to the convenience store, in addition twenty-five (25) parking spaces currently exist adjacent to the south driveway, and 41 trailer parking spaces are demonstrated along the northern property line. Based on the parking demonstrated on the plan, six (6) parking lot trees are required.

In addition to existing landscaping, two (2) new Red Maple trees and six (6) Colorado Spruce trees are proposed in the northwest corner of the site. Additional Juniper shrubs are also proposed at both sides of the driveway from Whitmore Lake Road (northern drive). We had previously suggested additional plantings south of the driveway along Whitmore Lake Road. In response, five (5) additional Armstrong Maple trees have been added along the Whitmore Lake Road ROW as suggested.

We had also previously suggested that additional landscaping adjacent to Whitmore Lake Road, particularly screening the propane tank would greatly enhance the site's aesthetics. Additional screening of the propane tank has been provided.

Further, landscaping adjacent to US-23 would enhance the aesthetics of the area and further screen the site from view. The applicant has provided groupings of shrubbery along the periphery of the detention basin. We suggest in addition to the shrubbery, the applicant

provide a row of spruce trees along the eastern perimeter of the detention area to provide screening of the site from US 23.

Items to be addressed: Consider addition of a row of spruce trees along the eastern perimeter of the detention area to provide screening from US 23.

LIGHTING

A lighting plan has been provided demonstrating photometrics and fixture details. Section 60.31 requires all fixtures be downward directed; all proposed fixtures appear to be downward directed.

In addition, all lighting fixtures shall not exceed 16 feet in height. All proposed fixtures are shown with a height of 14 or 15 feet. Four (4) fixtures are shown at 24 and 25 feet in height; these are noted as existing non-conforming light poles to remain.

Further, lighting illumination levels at property lines meet the standards of Section 60.31 E.1. However, the maximum lighting levels cannot exceed 25 foot-candles directly beneath a fixture, and shall not exceed 3 foot-candles directly between two (2) light fixtures. The lighting levels beneath and adjacent to the fuel canopies have been modified from the previous submittal to meet the required illumination levels.

Items to be addressed: None.

SIGNS

Two (2) existing freestanding signs are depicted along Whitmore Lake Road to be removed, as well as detail for a new freestanding ID/Price Sign (Sheet AG-100) which will be located north of the driveway.

The proposed freestanding meets the requirements outlined in Section 62.06. In addition to the freestanding sign, one (1) wall sign is proposed on the south elevation of the gasoline fuel canopy. Section 62.08 allows the permitted signs set forth in Section 62.06 A.1. To be attached either to a wall of the building or to the canopy of a fuel pump island. Section 62.06 A.1. allows for one wall sign.

Items to be Addressed: None.

FLOOR PLAN AND ELEVATIONS

Floor plans have been provided and appear acceptable. Elevations of the canopy and fuel dispensers have been provided on Sheets A-201 and A-202. Elevations demonstrating the new convenience store have been included in the plan set.

Items to be Addressed: None.

VARIANCES

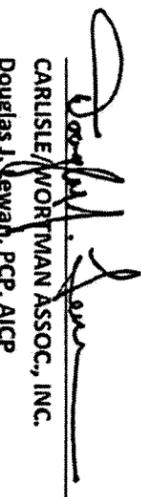
None requested or required.

Items to be Addressed: None.

RECOMMENDATIONS

We recommend the following items be addressed prior to site plan approval:

1. Items 1 through 7 listed in the Engineer's August 13, 2014 letter be addressed as a part of the detailed site plan review process and noted as such by Orchard, Hiltz and McCliment.
2. Any non-conformities on the existing site be remediated according to the Zoning Ordinance.
3. Underground storage tank permits will be required prior to Final Zoning Compliance and Certificate of Occupancy.
4. Consider addition of a row of spruce trees along the eastern perimeter of the detention area to provide screening from US 23.


CARLISLE/WORTMAN ASSOC., INC.
Douglas J. Lewah, PCP, AICP
Principal


CARLISLE/WORTMAN ASSOC., INC.
Laura K. Kreps, AICP
Associate

#271-02-1305

cc: Tom Nowatzke via tomnowatzkesr@msn.com
John Damrath via jd@damrath.com



ARCHITECTS, ENGINEERS, PLANNERS.

March 20, 2015

**Northfield Township
Building & Zoning Department**
8350 Main Street, Suite A
Whitmore Lake, Michigan 48189

Regarding: **Nowatzke Fuel Station**
Site Plan Review No. 4
OHM Job No. 0151-14-1021

We have reviewed the site plan material, dated March 6, 2015 and received by this office on March 13, 2015, for proposed site improvements to the Nowatzke Truck & Trailer, Inc. property located at 6900 Whitmore Lake Road. Plans were reviewed according to Township guidelines and engineering standards. A brief description of the project, followed by our comments, is provided below.

The applicant is requesting site plan approval for gasoline and diesel dispensers with fueling pads and canopies of 2,592 square feet and 1,440 square feet, respectively. Two underground storage tanks of 20,000 gallons and 30,000 gallons are also proposed. A convenience store is proposed to occupy 2,285 square feet of the existing building on-site.

Site Drainage

1. A drainage area map for the overall system, including any runoff from neighboring properties and County ROW contributing to the drainage area, shall be included. It appears that the drainage area on the southwest side of Whitmore Lake Road drains through an 18 inch storm sewer under Whitmore Lake Road towards the existing detention basin, and has not been included in the on-site stormwater system. We are aware that the existing pond was designed and constructed to include some amount of offsite flow from the Whitmore Lake Road ROW and surrounding properties, and this must be accounted for in the volume calculations.
2. The proposed expansion to the existing detention basin appears to be insufficient to store the as-calculated 100-year storm volume.
3. An emergency spillway shall be provided for the existing detention basin.
4. The Applicant shall provide the impervious cover post-development 100-year storm volume, and the total 100-year storm volume in the runoff summary.

Permits and Other Agency Approvals

Copies of all permits and/or letters of waiver, obtained to date, shall be forwarded to this office. The current status of all necessary permits should be included on the cover sheet. Before construction plan approval can be issued, the applicant must submit all necessary permits/approvals, including but not limited to the following agencies:

- Washtenaw County Road Commission (WCRC) for the work within the Whitmore Lake Road right-of-way and approval of the traffic impact assessment.
- Washtenaw County Water Resources Commissioner's Office (WCWRC) for drainage, soil erosion and sedimentation control.
- Northfield Township Building Department.
- Northfield Township Fire Department approval for fire code compliance.

OHM Advisors
34000 PLYMOUTH ROAD
LIVONIA, MICHIGAN 48150

T 734 522 6711
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Conclusion and Recommendations

As submitted, the site plan appears to be in substantial compliance with The Charter Township of Northfield requirements. We take no exception to the proposed site plan and recommend the Planning Commission consider approval of the site plan conditional upon the above mentioned comments being addressed administratively.

Please feel free to contact Jacob Rushlow at (734) 466-4517 or jacob.rushlow@ohm-advisors.com if you have any questions or concerns regarding this review.

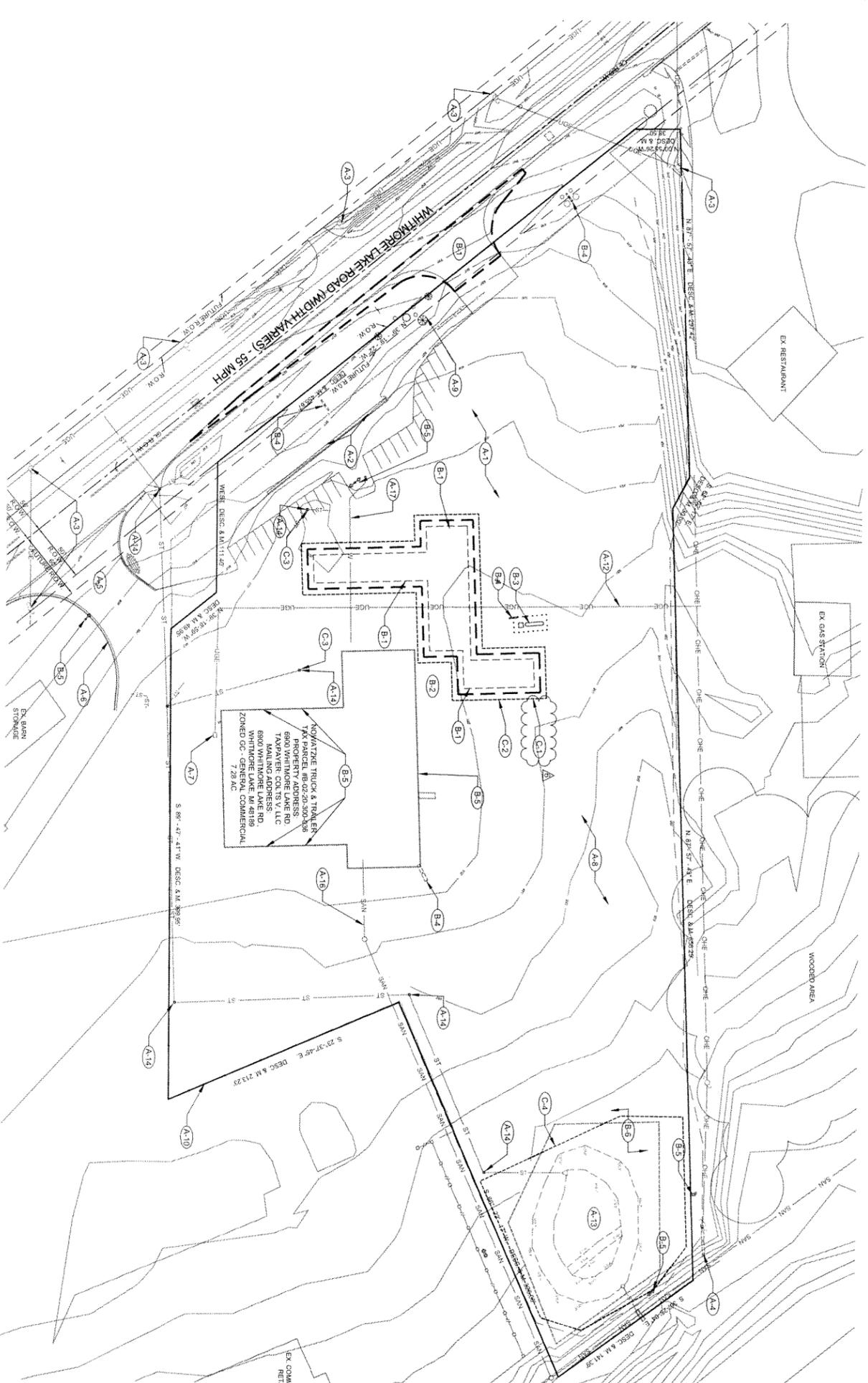
Sincerely,
OHM ADVISORS

A handwritten signature in black ink, appearing to read 'Jacob Rushlow'.

Jacob Rushlow, P.E.
Township Engineer

cc: Howard Fink, Township Manager (via e-mail)
William Wagner, Public Safety Director (via e-mail)
Pam Boegler, Northfield Township (via e-mail)
Kurt Wieland, Building/Zoning Official (via e-mail)
Martene Chockley, Planning Commission Chair (via e-mail)
Doug Lewan, Carlisle/Wortman Associates (via e-mail)
John Damrath, Damrath Group, LLC, (via e-mail)
Tom Nowatzke, Nowatzke Truck and Trailer, Inc., (via e-mail)
File

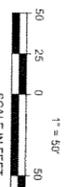
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DEMOLITION AND EROSION PLAN
SCALE: 1" = 50'

- A. EXISTING SITE FEATURES TO REMAIN**
- A.1 ASPHALT PAVEMENT
 - A.2 X ROCK WALL
 - A.3 POWER POLE
 - A.4 SIGN
 - A.5 APPROACH
 - A.6 CONCRETE CURB
 - A.7 TRANSFORMER PAD (SEE UTILITY DETAIL SHEET)
 - A.8 UNPAVED GRAVEL AREA
 - A.9 LANDSCAPING
 - A.10 PROPERTY LINE
 - A.11 ASPHALT
 - A.12 UNDERGROUND ELECTRIC LINE
 - A.13 DETENTION POND
 - A.14 CATCH BASIN
 - A.15 STORM SEWER
 - A.16 SANITARY LINE
 - A.17 WATER LINE
- B. SITE FEATURES TO BE REMOVED**
- B.1 SAWCUT, REMOVE AND DISPOSE OF SITE PAVEMENT AS REQUIRED TO ALLOW FOR NEW CONSTRUCTION. (SEE C-201)
 - B.2 CLEAR AND GRUB LAND AS REQUIRED TO ALLOW FOR NEW CONSTRUCTION
 - B.3 EXISTING PROPANE TANK TO BE RELOCATED
 - B.4 EXISTING SIGN (TBR)
 - B.5 HPS LIGHT FIXTURE
 - B.6 RELOCATE ANY VEHICLES WITHIN DETENTION POND EASEMENT TO PROPER PARKING AREAS

- C. NEW SITE FEATURES**
- C.1 INSTALL CONSTRUCTION FENCE. CONTRACTOR TO FIELD VERIFY AND COORDINATE LOCATIONS OF CONSTRUCTION ACCESS GATES) WITH OWNER'S REPRESENTATIVE (SEE DETAIL 4 ON SHEET C-500)
 - C.2 INSTALL SILT FENCE. (SEE DETAIL 2 ON SHEET C-500)
 - C.3 INSTALL INLET FILTERS (SEE DETAIL 1 ON SHEET C-500)
 - C.4 INSTALL SILT FENCE. (SEE DETAIL 5 ON SHEET C-500)
- GENERAL NOTES**
1. SEE THE LANDSCAPING PLAN FOR INFORMATION REGARDING PERMANENT STABILIZATION OF THE SITE.
 2. COLTY, LLC SHALL BE RESPONSIBLE FOR THE CONTINUED MAINTENANCE OF ALL PERMANENT SESC MEASURES THAT REMAIN AFTER PROJECT COMPLETION.



EXISTING	LEGEND	PROPOSED
CGRA & GUTTER	CGRA & GUTTER	CGRA & GUTTER
WATER LINE	WATER LINE	WATER LINE
STORM SEWER	STORM SEWER	STORM SEWER
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
OVERHEAD ELECTRIC	OVERHEAD ELECTRIC	OVERHEAD ELECTRIC
UNDERGROUND TELEPHONE	UNDERGROUND TELEPHONE	UNDERGROUND TELEPHONE
OVERHEAD TELEPHONE	OVERHEAD TELEPHONE	OVERHEAD TELEPHONE
MANHOLE	MANHOLE	MANHOLE
CONCRETE CURB	CONCRETE CURB	CONCRETE CURB
TRANSFORMER PAD	TRANSFORMER PAD	TRANSFORMER PAD
U/G ELECTRIC CONDUIT	U/G ELECTRIC CONDUIT	U/G ELECTRIC CONDUIT
POWER POLE	POWER POLE	POWER POLE
FIRE HYDRANT	FIRE HYDRANT	FIRE HYDRANT
TELEPHONE RISER	TELEPHONE RISER	TELEPHONE RISER
LIGHT POLE	LIGHT POLE	LIGHT POLE
START GATE VALVE	START GATE VALVE	START GATE VALVE
ELECTRIC METER	ELECTRIC METER	ELECTRIC METER
GAS METER	GAS METER	GAS METER
GATE VALVE	GATE VALVE	GATE VALVE
YARD BASIN	YARD BASIN	YARD BASIN
CLEAN OUT	CLEAN OUT	CLEAN OUT
EDGE OF WOODS	EDGE OF WOODS	EDGE OF WOODS
EDGE OF PROPOSED/EXISTING	EDGE OF PROPOSED/EXISTING	EDGE OF PROPOSED/EXISTING
CONCRETE THRESHOLD	CONCRETE THRESHOLD	CONCRETE THRESHOLD
EXISTING SPOT ELEVATIONS	EXISTING SPOT ELEVATIONS	EXISTING SPOT ELEVATIONS
PROPOSED SPOT ELEVATIONS	PROPOSED SPOT ELEVATIONS	PROPOSED SPOT ELEVATIONS
CONTOUR LINES	CONTOUR LINES	CONTOUR LINES
TO REMAIN	TO REMAIN	TO REMAIN
TO BE REMOVED	TO BE REMOVED	TO BE REMOVED
NEW CONSTRUCTION	NEW CONSTRUCTION	NEW CONSTRUCTION
LANDSCAPING	LANDSCAPING	LANDSCAPING
SMOOTH	SMOOTH	SMOOTH

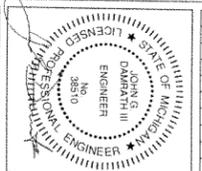
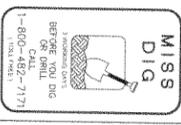
SOIL EROSION AND SEDIMENTATION CONTROL NOTES & MAINTENANCE NOTES:

1. THE LANDOWNER SHALL SUBMIT A SOIL EROSION CONTROL PLAN AND OBTAIN A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT, OR SIMILAR PERMIT FROM THE JURISDICTIONAL AUTHORITY, PRIOR TO ANY EARTH CHANGES.
2. THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AND PER THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT, OR SIMILAR PERMIT FROM THE JURISDICTIONAL AUTHORITY, PRIOR TO ANY EARTH CHANGES.
3. ALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE JURISDICTIONAL AUTHORITY.
4. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE 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 AND PONDS.
5. THE GENERAL CONTRACTOR SHALL STAGE ALL SOIL EROSION AND SEDIMENTATION CONTROL (SESC) WORK AS DIRECTED IN THE DRAWINGS AND PROJECT MANUAL, AND AS OTHERWISE NECESSARY OR APPROPRIATE TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
6. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF SESC DEVICES.
7. THE GENERAL CONTRACTOR SHALL MAINTAIN THE SESC MEASURES AS SHOWN IN THE DRAWINGS AND PROJECT MANUAL, BEFORE AND AFTER CONSTRUCTION OF THIS PROJECT, AND MAKE ANY NECESSARY MODIFICATIONS OR ADJUSTMENTS TO SESC MEASURES DUE TO CHANGING OR UNEXPECTED CONDITIONS SHALL BE COMPLETED WITH AS REQUIRED OR AS DIRECTED BY THE JURISDICTIONAL AUTHORITY.
8. IF ANY OF THE SESC MEASURES ON THE SITE ARE DEEMED INADEQUATE OR INEFFECTIVE, THE JURISDICTIONAL AUTHORITY HAS THE RIGHT TO REQUIRE ADDITIONAL SESC MEASURES AT THE EXPENSE OF THE GENERAL CONTRACTOR.
9. THE GENERAL CONTRACTOR SHALL INSPECT THE SESC DEVICES ONCE A WEEK UNDER ANY CIRCUMSTANCES, WITHIN 24 HOURS OF RAINFALL, AND DAILY DURING A PROLONGED RAIN EVENT. NON REPORTS SHALL BE MAINTAINED AND ACCESSIBLE IN ACCORDANCE WITH NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS. ANY REQUIRED MAINTENANCE SHALL BE PROVIDED PROMPTLY.
10. INSTALL SILT FENCE AS INDICATED IN THE DRAWINGS AND PROJECT MANUAL, PER ATTACHED DETAILS, AND AT ADDITIONAL AFFECTED AREAS AS NECESSARY.
11. A SILT FENCE SHALL BE INSPECTED ONCE A WEEK UNDER ANY CIRCUMSTANCES, WITHIN 24 HOURS OF RAINFALL, AND DAILY DURING A PROLONGED RAIN EVENT. REQUIRED MAINTENANCE SHALL BE PROVIDED PROMPTLY.
12. BUILD-UP OF SEDIMENT SHALL BE REMOVED WHEN SEDIMENT ACCUMULATED TO 1/3 TO 1/2 OF THE HEIGHT OF THE SILT FENCE. CHECKPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF EXPECTED USABLE LIFE AND THE BARRIER IS STILL REQUIRED. THE SILT FENCE SHALL BE REPLACED PROMPTLY.
13. INSTALL INLET FILTERS ON ALL PAVEMENT CATCH BASINS PER DETAIL.
14. A DRAIN GUARD SHALL BE INSPECTED ONCE A WEEK UNDER ANY CIRCUMSTANCES, WITHIN 24 HOURS OF RAINFALL, AND DAILY DURING A PROLONGED RAIN EVENT.
15. BUILD-UP OF SEDIMENT AND DEBRIS SHALL BE REMOVED PROMPTLY.
16. C. IF FILTER FABRIC CHECKPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF EXPECTED USABLE LIFE AND THE BARRIER IS STILL REQUIRED, THE FILTER FABRIC SHALL BE REPLACED PROMPTLY.
17. INSTALL DRAIN GUARD ON ALL CATCH BASINS PER DETAIL. SEED OR SOO THE AREA BETWEEN THE SILT FENCE AND A DRAIN GUARD SHALL BE INSPECTED ONCE A WEEK UNDER ANY CIRCUMSTANCES, WITHIN 24 HOURS OF RAINFALL, AND DAILY DURING A PROLONGED RAIN EVENT.
18. BUILD-UP OF SEDIMENT SHALL BE REMOVED WHEN SEDIMENT ACCUMULATED TO 1/3 TO 1/2 OF THE HEIGHT OF THE BARRIER IS STILL REQUIRED. THE FILTER FABRIC SHALL BE REPLACED PROMPTLY.
19. ALL STOCKPILED SOILS SHALL BE MAINTAINED IN SUCH A MANNER AS TO PREVENT EROSION FROM LEAVING THE SITE FOR MORE THAN 30 DAYS. THE STOCKPILE SHALL BE COVERED WITH A STOCKPILE MAT OR OTHER MEANS AS APPROVED BY THE JURISDICTIONAL AUTHORITY. MULCH MATTING MAY BE USED IN LIEU OF LOOSE MULCH.
20. IF ANY PUMP-DRIVEN DEWATERING IS NEEDED, IT SHALL BE DISCHARGED THROUGH A FILTER BAG OVER A WELL-VEGETATED AREA. THE PUMP MUST DISCHARGE AT A NON-EROSIVE VELOCITY. IF NECESSARY, AN APPROVED ENERGY DISSIPATER MAY BE USED.
21. CONSTRUCTION ACCESS TO BE FROM THE EXISTING PARKING LOT, OR OTHER EXPRESSLY DESIGNATED AREA. PROVIDE A 12' WIDE X 50' LONG (MIN.) STONE TRACKING MAT AT ENTRANCE PRIOR TO CONSTRUCTION. SEE DETAIL 1, SHEET C-507 FOR TEMPORARY STONE ACCESS DRIVE DETAIL.
22. ALL MUD, DIRT, AND DEBRIS TRACKED ONTO THE PARKING LOT OR ANY ROADWAY SHALL BE REMOVED IMMEDIATELY BY THE GENERAL CONTRACTOR.
23. STREETS AND/OR PARKING AREAS WILL BE SEPARATED AND SWEEPED ON A DAILY BASIS BY THE GENERAL CONTRACTOR. AT ALL TIMES, TRUCKS SHALL BE MAINTAINED FOR DUST CONTROL. SPRINKLING TANK TRUCKS SHALL BE AVAILABLE TO PREVENT DUST PROBLEMS AS A RESULT OF CONSTRUCTION ACTIVITY.
24. PERMANENT SESC MEASURES FOR ANY DISTURBED LAND AREA SHALL BE COMPLETED BY THE GENERAL CONTRACTOR WITHIN 30 DAYS OF THE FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO COMPLETE SESC MEASURES WITHIN 30 DAYS, THE GENERAL CONTRACTOR SHALL MAINTAIN THE SESC MEASURES UNTIL PERMANENT SESC MEASURES ARE IMPLEMENTED. ALL PERMANENT SESC MEASURES WILL BE MAINTAINED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
25. THE GENERAL CONTRACTOR SHALL FINAL GRADE, ESTABLISH VEGETATION AND/OR LANDSCAPE ALL DISTURBED AREAS NOT BUILT OR PAVED UPON.
26. THE GENERAL CONTRACTOR SHALL REMOVE ALL TEMPORARY SESC DEVICES AFTER PERMANENT STABILIZATION IS ESTABLISHED.

DEMOLITION NOTES:

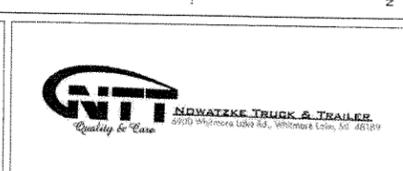
1. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY SITE DEMOLITION, EXCAVATION OR GRADING.
2. APPROXIMATE CLEANING, STRUCTURE REMOVAL AND APPLICABLE STOCKPILING IN ACCORDANCE WITH THE PROJECT MANUAL. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE LAWFUL REMOVAL AND DISPOSAL OF ALL RUBBISH, TRASH, DEBRIS, ORGANIC MATERIAL, ETC. SEE REMOVAL TABLE ON THIS SHEET FOR SALVAGING INSTITUTIONS.
3. NO ATTEMPT IS TO BE MADE TO REMOVE AND/OR DEMOLISHED EITHER ON THE DRAWINGS OR IN THE PROJECT MANUAL. THE CONTRACTOR MUST VISIT THE SITE TO ASSESS EXISTING PHYSICAL CONDITIONS AS WELL AS REVIEW THE DRAWINGS AND UTILITIES RECORDS TO DETERMINE NECESSARY TO ACCOMPLISH INTENDED RESULTS DESCRIBED BY THE PROJECT DRAWINGS AND PROJECT MANUAL.
4. COMPLETELY RESTORE ALL DISTURBED AREAS TO CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITION AND TO THE SATISFACTION OF THE JURISDICTIONAL AUTHORITY. ALL COSTS FOR RESTORATION SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY. RESTORATION WORK SHALL BE PERFORMED WITHIN FIVE (5) WORKING DAYS AFTER COMPLETION OF FINAL GRADING.
5. WHERE EXISTING PAVEMENT IS TO BE PARTIALLY REMOVED, SAWCUT PAVEMENT TO FULL DEPTH TO PROVIDE A SMOOTH JOINT WITH PROPOSED PAVEMENT.
6. ALL DEMOLITION WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE JURISDICTIONAL AUTHORITY.
7. IF APPROPRIATE, RETAIN SOIL SPILLS FROM CONSTRUCTION EXCAVATION AND STORE AT DESIGNATED LOCATION FOR RE-USE, IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
8. PROJECT DRAWINGS, AND OWNER'S REPRESENTATIVE APPROVAL(S).

NOTE
AREA OF DEMOLITION: 1.32 ACRES (79,091.78 S.F.)



REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12/31/14	REVIEW COMMENTS
4	01/20/15	REVIEW COMMENTS
5	03/06/15	REVIEW COMMENTS
6	03/13/15	WCWRC COMMENTS
7	04/01/15	WCWRC SOIL EROSION COMMENTS
8	7/??/15	REVIEW COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600

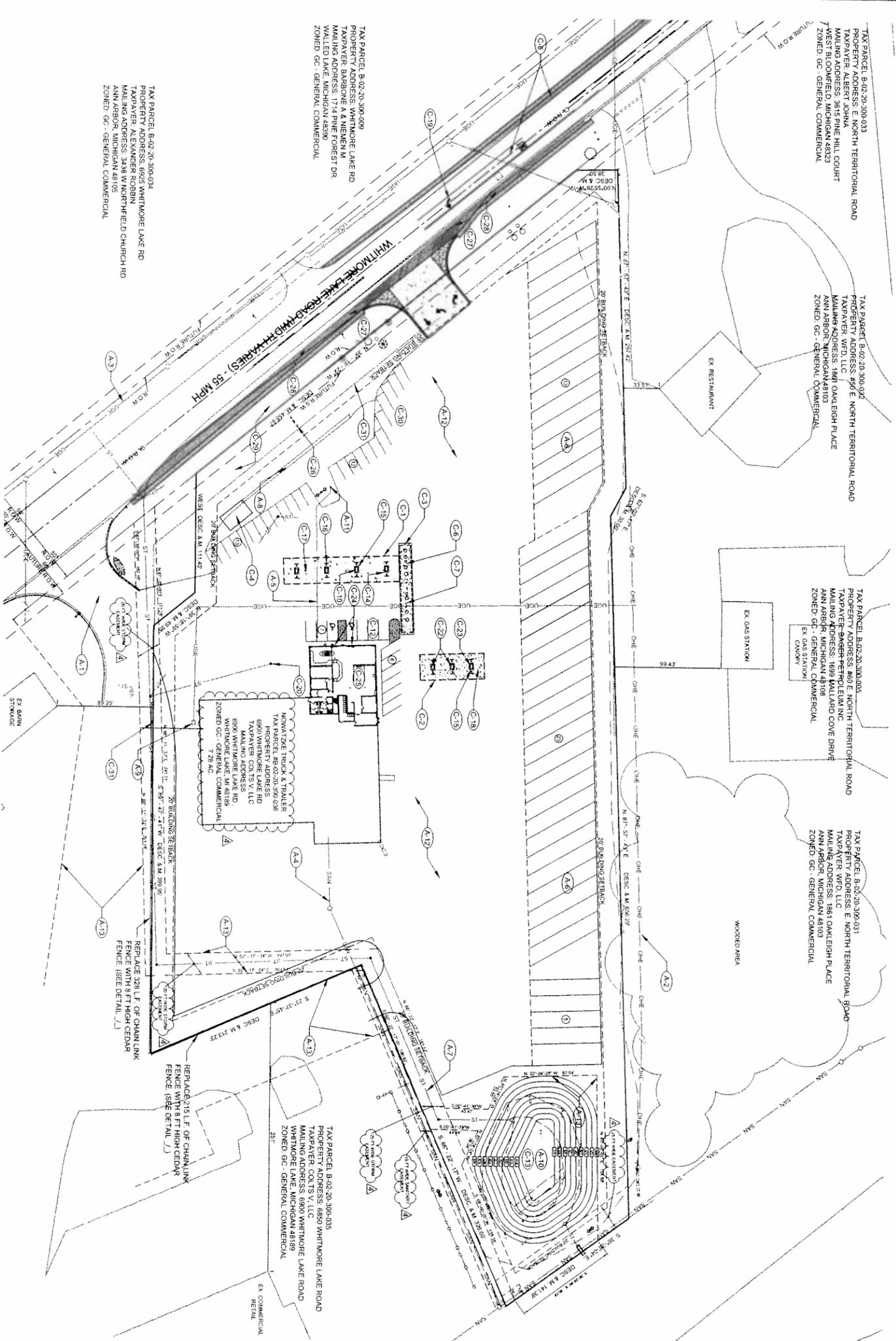


DAMRATHGROUP
development support services

Damrath Group, LLC
143 Cady Centre, #101
Northville, MI 48161
Office: 248.880.2158

DATE: 12/31/14
PROJECT NO.: 000000
DESIGNED BY: JD
DRAWN BY: JH
CHECKED BY: JD

DEMOLITION & EROSION CONTROL PLAN
SHEET NO. C-100



SITE PLAN
SCALE 1" = 50'-0"

- A. EXISTING SITE FEATURES TO REMAIN**
- (A.1) ENTRANCE TO REMAIN
 - (A.2) OVERHEAD ELECTRIC (TYP.)
 - (A.3) UNDERGROUND ELECTRIC (TYP.)
 - (A.4) SANITARY LINE (TYP.)
 - (A.5) WATER LINE (TYP.)
 - (A.6) TRAILER STORAGE
 - (A.7) STORM SEWER (TYP.)

- (A.8) ROCK WALL
- (A.9) TRANSFORMER
- (A.10) DETENTION POND
- (A.11) WELL
- (A.12) EXISTING DRIVE TO REMAIN
- (A.13) EASEMENTS (SEE DAVID C. ADAMS & SON SURVEY NO. 19933 DATED 9/19/14)

SCOPE OF WORK

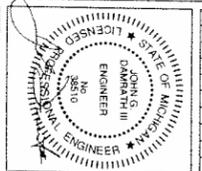
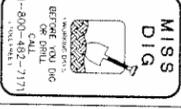
- C. PROPOSED SITE IMPROVEMENTS**
- (C.1) 24.00' X 108.00' CANOPY (2,592 S.F.) CONSTRUCTION IMPROVEMENT PLAN ON SHEET A-101
 - (C.2) 24.00' X 60.00' CANOPY (1,440 S.F.) COLUMNS AND FOOTINGS SEE CONSTRUCTION IMPROVEMENT PLAN ON SHEET A-101
 - (C.3) 6' MOUNTING WELLS
 - (C.4) RELOCATED PROGRAM TANK
 - (C.5) 12 FT X 8 FT X 8' CONCRETE TANK MAT (SEE PAVEMENT DETAIL SHEET)
 - (C.6) 20,000 GALLON DOUBLE WALL SPILT UNDERGROUND STORAGE TANK 4,000 GALLONS PREMIUM/10,000 REGULAR (SEE TANK DETAIL SHEET)
 - (C.7) 30,000 GALLON DOUBLE WALL UNDERGROUND DIESEL STORAGE TANK (SEE TANK DETAIL SHEET)
 - (C.8) WIDER ROAD AND ADD LEFT TURN LANE (SEE SHEET C-301)
 - (C.9) GAS LINE DISPENSER WITH CARD READER (SEE DISPENSER AND PIPING DETAILS SHEET)
 - (C.10) AUTOMOBILE MULTI-PRODUCT DISPENSER (3+1 GASOLINE/DIESEL) (SEE DISPENSER AND PIPING DETAILS SHEET)
 - (C.11) HEAVY DUTY BITUMINOUS PAVEMENT
 - (C.12) ACCESS TO THE CONVENIENCE STORE MUST MEET ALL APPLICABLE ADA REQUIREMENTS REGARDING VAN ACCESSIBLE PARKING SPACES AND DEDICATED ACCESS WAYS INTO THE BUILDING
 - (C.13) EXCAVATE, REMOVE, LEGALLY DISPOSE OF APPROXIMATELY 760 CUBIC YARDS OF EXISTING SAND AND GRAVEL WITHIN PLANT NATIVE WETLAND PLATINGS WITHIN DETENTION BASIN AREA (SEE LANDSCAPE PLAN)
 - (C.14) TANK VENT RISERS (SEE DISPENSER AND PIPING DETAILS SHEET)
 - (C.15) 4.00' X 6.00' DISPENSER ISLAND TYP 7 PLACES (SEE DISPENSER AND PIPING DETAILS SHEET)
 - (C.16) U-SHAPED BOLLARD AT CANOPY COLUMNS (SEE DISPENSER AND PIPING DETAILS SHEET)
 - (C.17) 24 FT X 108 FT X 8' CONCRETE CANOPY MAT (SEE PAVEMENT DETAIL SHEET)
 - (C.18) 24 FT X 60 FT X 8' CONCRETE CANOPY MAT (SEE PAVEMENT DETAIL SHEET)
 - (C.19) DIRECTIONAL PAVEMENT LEFT TURN MARKINGS (SEE SHEET C-302)
 - (C.20) INSTALL INLET FILTERS (SEE DETAIL 1 ON SHEET C-300)
 - (C.21) DIMENSION CONTROL POINT ALL DIMENSIONS ARE PARALLEL OR EAST SIDE OF THE SITE UNLESS OTHERWISE STATED
 - (C.22) REPAIR EXISTING CHAIN LINK FENCE AS NEEDED AND ADD NEW VINYL SLATS FOR SCREENING
 - (C.23) DUAL MASTER DISPENSER
 - (C.24) POST MOUNTED VAN ACCESSIBLE E PARKING SIGN
 - (C.25) CONVERT APPROX. 2,265 S.F. OF EXISTING BLDG INTO NEW CONVENIENCE STORE
 - (C.26) NEW ID SIGN (SEE SHEET C-304)
 - (C.27) INSTALL NEW TAPERS (SEE SHEET C-301)
 - (C.28) WIDEN PAVEMENT AND SHOULDER
 - (C.29) PEN SHEET C-301
 - (C.30) NEW LANDSCAPING (SEE SHEET L-100)
 - (C.31) EMB. OVER PARKING (12 SPACES)



NOTES TO GENERAL CONTRACTOR

1. UNDERGROUND UTILITIES MUST BE MARKED AS REQUIRED BY PUBLIC ACT 53 OF 1974 TELEPHONE THE REGIONAL UTILITY LOCATION/PROTECTORIAL SYSTEM OFFICE A MINIMUM OF THREE (3) WORKING DAYS BEFORE ANY DIGGING.
2. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONFORMING THE ANY CONSTRUCTION.
3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CALCULATING ALL MATERIAL QUANTITIES.
4. SEE SHEET G-002 FOR OTHER IMPORTANT GENERAL NOTES.
5. TOTAL DISTURBED AREA OF THIS PROJECT IS 1.82 ACRES (79,091.78 S.F.)
6. NO EXPANSION OF IMPERVIOUS AREA IS MADE PART OF THIS PROJECT.
7. DETENTION POND SHALL BE ENLARGED BY 760 C.Y. TO MEET CURRENT WPC STANDARDS
8. SITE SHALL CONTINUE TO UTILIZE EXISTING WATER, STORM AND SANITARY SYSTEMS IN PLACE.
9. NO UTILITY ALTERATIONS ARE PROPOSED AS PART OF THIS PROJECT.

EXISTING	PROPOSED
1. GARB & OUTLET	1. GARB & OUTLET
2. SANITARY SEWER	2. SANITARY SEWER
3. GAS LINE	3. GAS LINE
4. OVERHEAD ELECTRIC	4. OVERHEAD ELECTRIC
5. UNDERGROUND ELECTRIC	5. UNDERGROUND ELECTRIC
6. AIR LINE	6. AIR LINE
7. OVERHEAD TELEPHONE	7. OVERHEAD TELEPHONE
8. UNDERGROUND TELEPHONE	8. UNDERGROUND TELEPHONE
9. STORM SEWER	9. STORM SEWER
10. MANHOLE	10. MANHOLE
11. CATCH BASIN	11. CATCH BASIN
12. V.I.G. ELECTRIC CONDUIT	12. V.I.G. ELECTRIC CONDUIT
13. FIRE HOSE	13. FIRE HOSE
14. TELEPHONE RISER	14. TELEPHONE RISER
15. TELEPHONE MANHOLE	15. TELEPHONE MANHOLE
16. LIGHT POLE	16. LIGHT POLE
17. START GATE VALVE	17. START GATE VALVE
18. GAS METER	18. GAS METER
19. GATE VALVE	19. GATE VALVE
20. YARD BASIN	20. YARD BASIN
21. CULM OUT	21. CULM OUT
22. EDGE OF WOODS	22. EDGE OF WOODS
23. DECIDUOUS TREES/SHRUB	23. DECIDUOUS TREES/SHRUB
24. CONCRETE REINFORCING	24. CONCRETE REINFORCING
25. CONCRETE	25. CONCRETE
26. TO REMAIN	26. TO REMAIN
27. TO BE REMOVED	27. TO BE REMOVED
28. SALT TRENCH	28. SALT TRENCH
29. LIMITS OF WORK	29. LIMITS OF WORK
30. SWATH	30. SWATH



REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12/31/14	REVIEW COMMENTS
4	03/06/15	REVIEW COMMENTS
5	04/01/15	WCWRC SOIL EROSION COMMENTS
6	??/??/15	REVIEW COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600

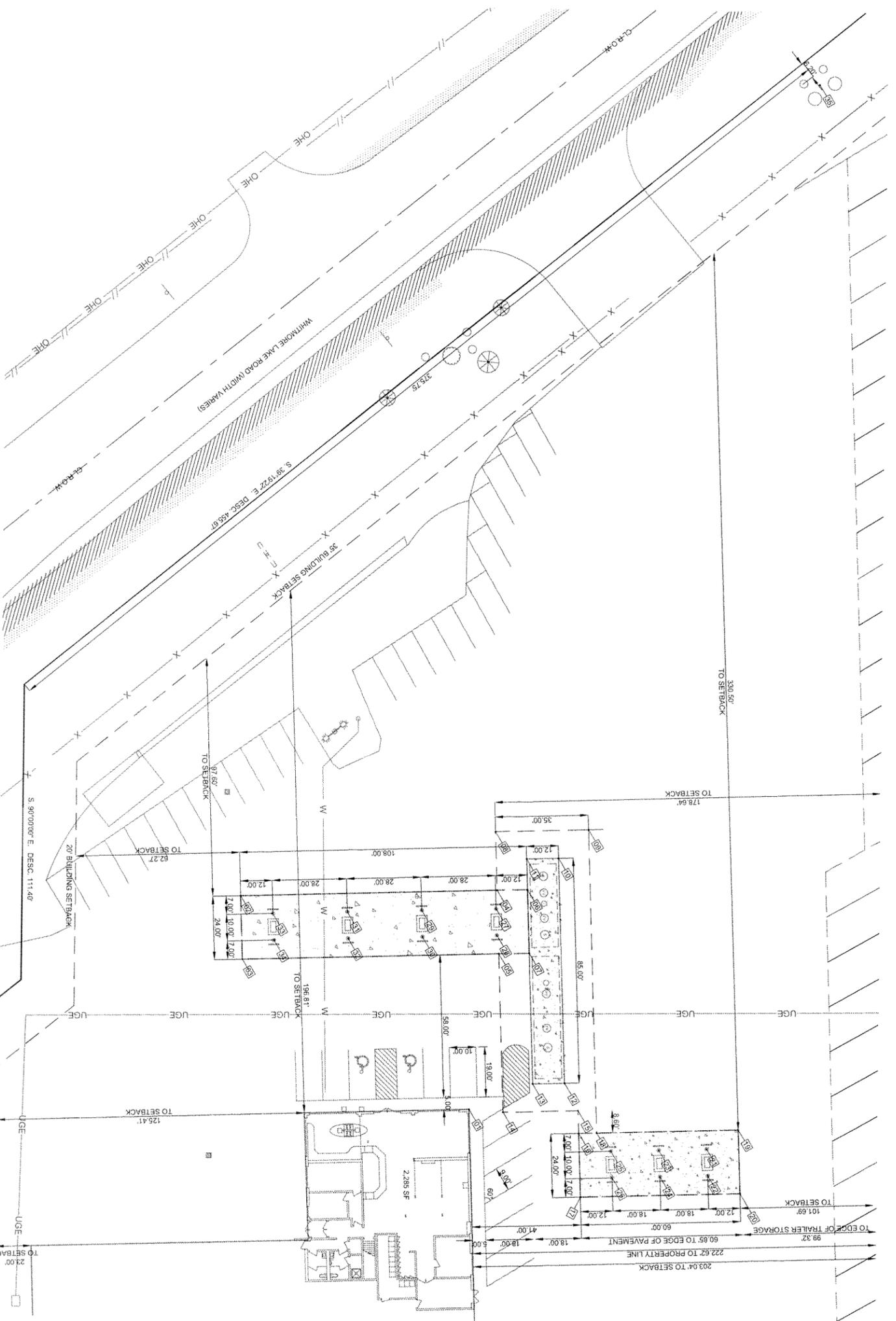


DAMRATH GROUP
development support services

Damrath Group, LLC
143 Oak-Centre, #161
Northville, MI 48161
Office: 248.880.2158

DATE: 12/31/14
PROJECT NO.: 000000
DESIGNED BY: JD
CHECKED BY: JD

SITE PLAN
SHEET NO. C-200



DIMENSION CONTROL SITE PLAN
SCALE: 1" = 20'-0"

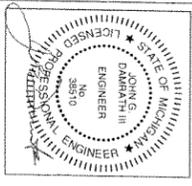


COORDINATES PLAN

POINT	X	Y	NOTE	POINT	X	Y	NOTE	POINT	X	Y	NOTE	POINT	X	Y	NOTE	POINT	X	Y	NOTE
01	0.00	0.00	BUILDING CORNER	08	-104.66	12.71	SAWCUT CORNER	15	1.32	41.01	SAWCUT CORNER	22	26.91	88.90	CENTER OF COLUMN FOOTING	29	-76.66	-15.84	CENTER OF COLUMN FOOTING
02	-82.66	83.64	24 FT X 108 FT CONCRETE CANOPY MAT CORNER	09	-104.66	47.88	SAWCUT CORNER	16	9.91	41.01	24 FT X 60 FT CONCRETE CANOPY MAT CORNER	23	16.91	70.91	CENTER OF COLUMN FOOTING	30	-85.66	-15.84	CENTER OF COLUMN FOOTING
03	-56.66	83.94	24 FT X 108 FT CONCRETE CANOPY MAT CORNER	10	-94.17	36.15	12 FT X 85 FT CONCRETE TANK MAT CORNER	17	33.91	41.01	24 FT X 60 FT CONCRETE CANOPY MAT CORNER	24	26.91	70.91	CENTER OF COLUMN FOOTING	31	-75.66	-43.84	CENTER OF COLUMN FOOTING
04	-82.66	12.71	SAWCUT CORNER	11	-94.17	24.15	12 FT X 85 FT CONCRETE TANK MAT CORNER	18	9.91	47.78	SAWCUT CORNER	25	16.91	52.91	CENTER OF COLUMN FOOTING	32	-85.66	-43.84	CENTER OF COLUMN FOOTING
05	-82.66	12.71	SAWCUT CORNER	12	-9.17	36.15	12 FT X 85 FT CONCRETE TANK MAT CORNER	19	9.91	101.00	24 FT X 60 FT CONCRETE CANOPY MAT CORNER	26	26.91	52.91	CENTER OF COLUMN FOOTING	33	-75.66	-71.84	CENTER OF COLUMN FOOTING
06	-82.66	24.15	24 FT X 108 FT CONCRETE CANOPY MAT CORNER	13	-9.17	24.15	12 FT X 85 FT CONCRETE TANK MAT CORNER	20	33.91	101.00	24 FT X 60 FT CONCRETE CANOPY MAT CORNER	27	-85.66	-71.84	CENTER OF COLUMN FOOTING	34	-71.84	-71.84	CENTER OF COLUMN FOOTING
07	-82.66	24.15	24 FT X 108 FT CONCRETE CANOPY MAT CORNER	14	1.32	12.71	SAWCUT CORNER	21	16.91	88.90	CENTER OF COLUMN FOOTING	28	-85.66	12.16	CENTER OF COLUMN FOOTING	35	-383.00	-142.07	CENTER OF NEW SIGN

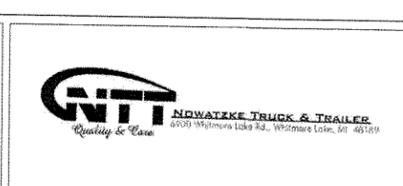
EXISTING	PROPOSED
CLUB & GUTTER	CLUB & GUTTER
WATER LINE	WATER LINE
GAS LINE	GAS LINE
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC
AIR LINE	AIR LINE
OVERHEAD TELEPHONE	OVERHEAD TELEPHONE
STORM SEWER	STORM SEWER
MANHOLE	MANHOLE
CATCH BASIN	CATCH BASIN
UG ELECTRIC CONDUIT	UG ELECTRIC CONDUIT
POWER POLE	POWER POLE
TELEPHONE RISER	TELEPHONE RISER
TELEPHONE MANHOLE	TELEPHONE MANHOLE
LIGHT POLE	LIGHT POLE
SLIGHT GATE VALVE	SLIGHT GATE VALVE
GAS METER	GAS METER
GATE VALVE	GATE VALVE
CLEAN OUT	CLEAN OUT
EDGE OF FINISH	EDGE OF FINISH
DECOLOROUS TREE/SHRUB	DECOLOROUS TREE/SHRUB
CORNER TREE/SHRUB	CORNER TREE/SHRUB
CONTOUR LINES	CONTOUR LINES
TO BE REMOVED	TO BE REMOVED
TO REMAIN	TO REMAIN
SALT FENCE	SALT FENCE
LIMITS OF WORK	LIMITS OF WORK
SAWCUT	SAWCUT

MISS DIG
BEFORE YOU DIG
1-800-482-7171



REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12/31/14	REVIEW COMMENTS
4	03/06/15	REVIEW COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600



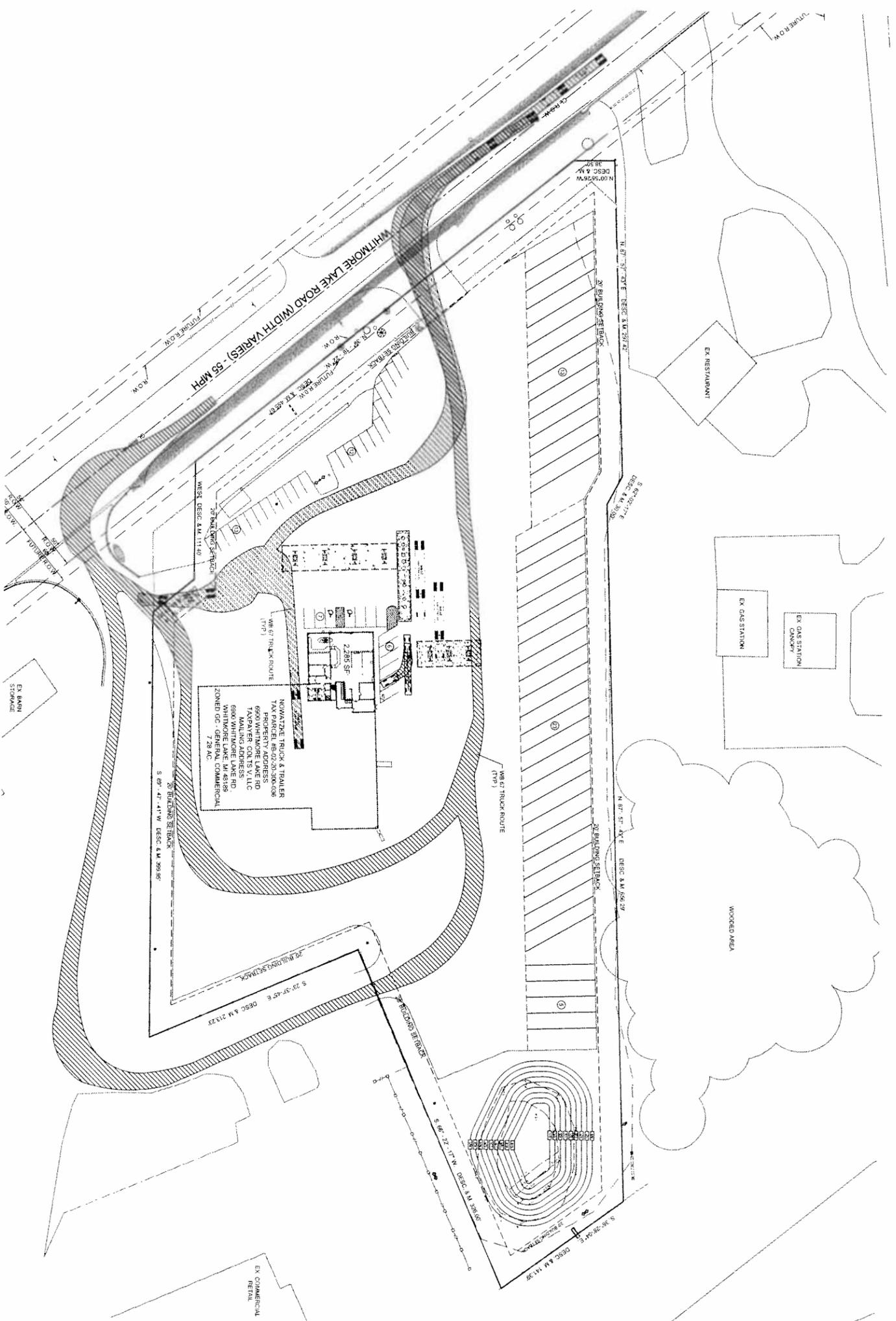
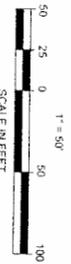
DAMRATHGROUP
development support services

Damrath Group, LLC
143 Cady Centre, #161
Northville, MI 48161
Office: 248.880.2155

DATE: 12/31/14
PROJECT NO.: 0000000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

DIMENSION CONTROL
SITE PLAN
SHEET NO. C-201

TRUCK TURN PLAN
SCALE 1" = 50'-0"



NOWATZKE TRUCK & TRAILER
744 PARCEL #8502-0306-036
6900 WHITMORE LAKE RD
TAPAWATER COLTS V, LLC
MAILING ADDRESS:
5000 WHITMORE LAKE RD
WHITMORE LAKE, MI 48189
ZONED GC - GENERAL COMMERCIAL
7.28 AC

EXISTING	PROPOSED
--- CANB & GUTTER	--- CANB & GUTTER
--- WATER LINE	--- WATER LINE
--- GAS LINE	--- GAS LINE
--- UNDERGROUND ELECTRIC	--- UNDERGROUND ELECTRIC
--- AIR LINE	--- AIR LINE
--- OVERHEAD TELEPHONE	--- OVERHEAD TELEPHONE
--- STORM SEWER	--- STORM SEWER
--- MANHOLE	--- MANHOLE
--- CATCH BASIN	--- CATCH BASIN
--- VARDWELL LIGHT	--- VARDWELL LIGHT
--- U/G ELECTRIC CONDUIT	--- U/G ELECTRIC CONDUIT
--- POWER POLE	--- POWER POLE
--- TELEPHONE RISER	--- TELEPHONE RISER
--- TELEPHONE MANHOLE	--- TELEPHONE MANHOLE
--- LIGHT POLE	--- LIGHT POLE
--- STUFF GUY VALVE	--- STUFF GUY VALVE
--- GAS WATER	--- GAS WATER
--- GATE VALVE	--- GATE VALVE
--- CLEAN OUT	--- CLEAN OUT
--- CLEAN OUT WITH CONC	--- CLEAN OUT WITH CONC
--- DECORATIVE TREES/SHRUB	--- DECORATIVE TREES/SHRUB
--- CONCRETE SPOT ELEVATIONS	--- CONCRETE SPOT ELEVATIONS
--- VALVE & APPROX MATCH EXIST	--- VALVE & APPROX MATCH EXIST
--- TO BE REMOVED	--- TO BE REMOVED
--- LIMITS OF WORK	--- LIMITS OF WORK
--- SWANCU	--- SWANCU

REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12/31/14	REVIEW COMMENTS
4	03/06/15	REVIEW COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600



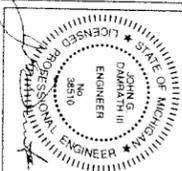
DAMRATHGROUP
development support services

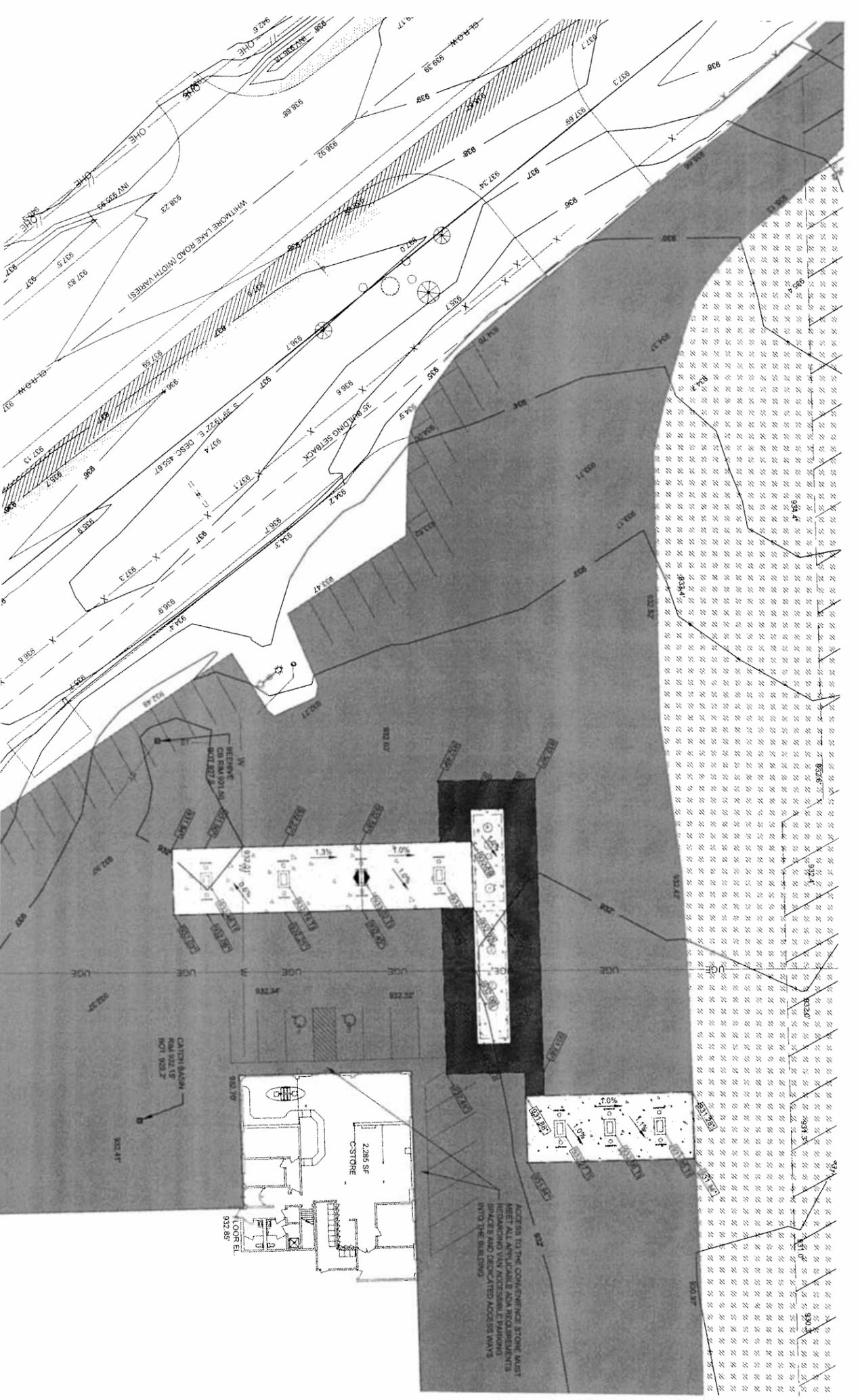
Damrath Group, LLC
143 Cady Centre, #151
Northville, MI 48167
Office: 248.840.2158

MISS DIG
BEFORE YOU DIG
CALL 811
1-800-487-7173

DATE: 12/31/14
PROJECT NO.: 000000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

TRUCK TURN PLAN
SHEET NO.
C-202



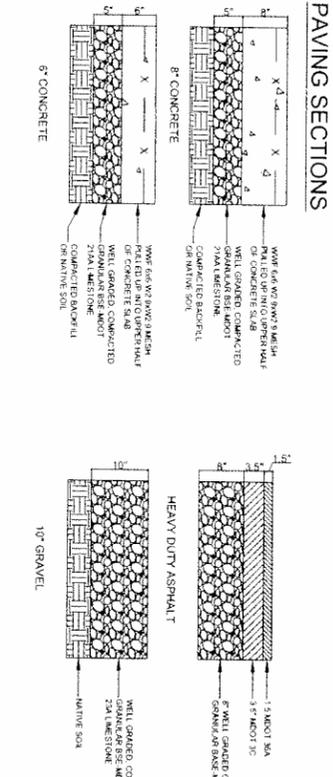


GRADING AND PAVING PLAN

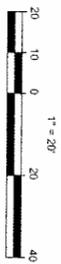
SCALE: 1" = 20'-0"

- #### CONSTRUCTION SEQUENCE
1. INSTALL TRAFFIC AND PEDESTRIAN SAFETY BARRICADES.
 2. INSTALL TEMPORARY EROSION CONTROL MEASURES. PROTECT ALL AREAS THAT COULD ALLOW SEDIMENT TO MIGRATE OFF-SITE VIA SURFACE RUNOFF. CONSTRUCT EROSION CONTROL SYSTEMS OR VIA TRACKING CAUSED BY CONSTRUCTION EQUIPMENT. MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING ACTIVITIES.
 3. COMPLETE REQUIRED REMOVALS AND LEGALLY DISPOSE OF DEBRIS AND WASTE OFF-SITE.
 4. PERFORM MASS GRADING AND CONSTRUCT SITE IMPROVEMENTS.
 5. DAILY OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DITCHES, SILT FENCING, SEDIMENT TRAPS, ETC. SEED AND MULCH AS REQUIRED.
 6. INSPECT AND MAINTAIN ALL EROSION CONTROL MEASURES PER JURISDICTIONAL AUTHORITY REQUIREMENTS.
 7. REMOVE TEMPORARY EROSION CONTROL MEASURES WHEN SITE IS STABILIZED.

- #### PAVING LEGEND
- 6" CONCRETE PAVEMENT
 - 6" CONCRETE PAVEMENT
 - 10" GRAVEL
 - HEAVY DUTY ASPHALT PAVEMENT
 - EXISTING ASPHALT PAVEMENT
 - NEW 6" ASPHALT PAVEMENT
 - GRAVEL SHOULDER



NOTE:
ALL GRADES ARE GUTTER/PAVEMENT GRADES.
TOP OF CURB IS 6" HIGHER UNLESS OTHERWISE NOTED



FUEL TANK ELEVATION COORDINATION CHART

NO.	DESCRIPTION	FURTHEST ISLAND (LI)	LOWEST ISLAND (LI)
1	ELEVATION AT TOP OF ISLAND	932.48	931.65
2	MIN. SLOPE OF PIPING = (L)X PER FOOT x (H) WHERE L = 1.1 - 105 FT. L2 = 105 FT.	1.09 FT.	1.09 FT.
3	DISPENSER CONCRETE DRIVE	8"	8"
4	PIPE COVER	3"	3"
5	PIPE DIAMETER	10"	10"
6	TANK CONNECTION TOTAL	53"	53"
7	GRADE DIFFERENTIAL = (#2 + #3)	2.92 FT.	2.92 FT.
8	TOP OF TANKS = (#1 + #4)	4.01 FT.	4.01 FT.
9	GRADE DIFFERENTIAL = (#2 + #3)	928.47	928.47
10	TOP OF TANKS = LOWEST CALCULATED ELEVATION	927.84	927.84
11	CHECK MIN. MAX. BURIAL DEPTH	931.90	931.90
12	LOWEST ELEVATION OF SLAB ABOVE TANK	4.06 FT.	4.06 FT.
13	DEPTH OF BURY - (#7 - #6)	927.84	927.84

NOTE: IF #8 < 4.0 FT., SET TOP OF TANKS = (#7 - 4.0 FT.) IF #8 > 7.0 FT., CONTACT OWNER FOR CERTIFICATION OF BURIAL DEPTH WITH TANK MANUFACTURER.

CANOPY PAD ELEVATION COORDINATION CHART

TOP OF ISLAND ELEVATION AT LOWEST ISLAND = 931.85

ELEVATION OF ALL TOP OF FOOTINGS (PER CANOPY DRAWING) = XXX.XX

1. ELEVATIONS OF TOP-OF-CANOPY COLUMN/FOOTINGS AT DISPENSER ISLANDS SHALL BE IDENTICAL.
2. TOP OF ALL CANOPY FOOTINGS SHALL BE 2-3 1/2" LOWER THAN THE LOWEST DISPENSER TOP OF ISLAND ELEVATION.
3. THE GENERAL CONTRACTOR SHALL BASE AIDS ON FOOTING ELEVATIONS AS INDICATED. ANY MODIFICATION TO FOOTING ELEVATIONS MUST BE APPROVED BY OWNERS REPRESENTATIVE IN WRITING.
4. VERIFY ELEVATIONS FOR BUILDINGS, CANOPY, SIGNS AND OTHER STRUCTURE PER DRAWINGS. THE GENERAL CONTRACTOR SHALL NOTIFY OWNERS REPRESENTATIVE OF ANY DISCREPANCY PRIOR TO CONSTRUCTION.

- #### FUEL GRADING DESIGN STANDARDS
1. PROVIDE POSITIVE DRAINAGE AWAY FROM FUEL TANKS AND CONCRETE PAVEMENT. SLOPE OF 5% MIN. EXPRESS. VENT EXHAUST SHALL NOT DRAIN THROUGH THE REPRESENTATIVE SURFACE WATER SHALL NOT DRAIN THROUGH THE FUEL/CANOPY AREAS.
 2. PROVIDE MAXIMUM OF 1% SLOPES ACROSS FUEL CENTER CONCRETE PADS UNDER CANOPY AREA, WHILE MAINTAINING POSITIVE DRAINAGE AWAY FROM THE DISPENSER ISLANDS. GRADES AT TANK PAD SHALL NOT EXCEED 3% SLOPE.

- #### SITE SPECIFIC GRADING GENERAL NOTES
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF ANY EXISTING DRIVEWAYS AND SIDEWALKS THAT MAY BE DISTURBED DURING INSTALLATION OF VENT STANDS, AIR STANDS, ETC.
- EXISTING LANDSCAPE
- EXISTING LIGHT STANDARDS(S) AND WIRING
- #### NOTES TO GENERAL CONTRACTOR
1. UNDERGROUND UTILITIES MUST BE MARKED AS REQUIRED BY PUBLIC ACT 52 OF 1974, TELEPHONE, THE REGIONAL UTILITY LOCATION/REPORT-CALL SYSTEM SHALL INCLUDE AND IS NOT TO BE DISTURBED DURING INSTALLATION OF THIS PROJECT.
 2. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION.
 3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CALCULATING ALL MATERIAL QUANTITIES.
 4. SEE SHEET G-002 FOR OTHER IMPORTANT GENERAL NOTES.
 5. THE CONTRACTOR SHALL INCLUDE THE BITUMINOUS AND CONCRETE PAVING SHOWN ON THE PLANS IN THEIR BASE BID.
 6. THE CONTRACTOR SHALL PROVIDE THE UP-CHARGE, IF ANY, TO INSTALL CONCRETE PAVING INSTEAD OF BITUMINOUS PAVING. THIS PRICE SHALL ALSO INCLUDE THE COSTS TO PROTECT THE NEW CONCRETE PAVING FROM WINTER CONDITIONS.

REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12/13/14	REVIEW COMMENTS
4	03/06/15	REVIEW COMMENTS
5	03/13/15	WCWRC COMMENTS
6	04/07/15	WCWRC COMMENTS

DATE: 12/31/14
PROJECT NO.: 000900
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

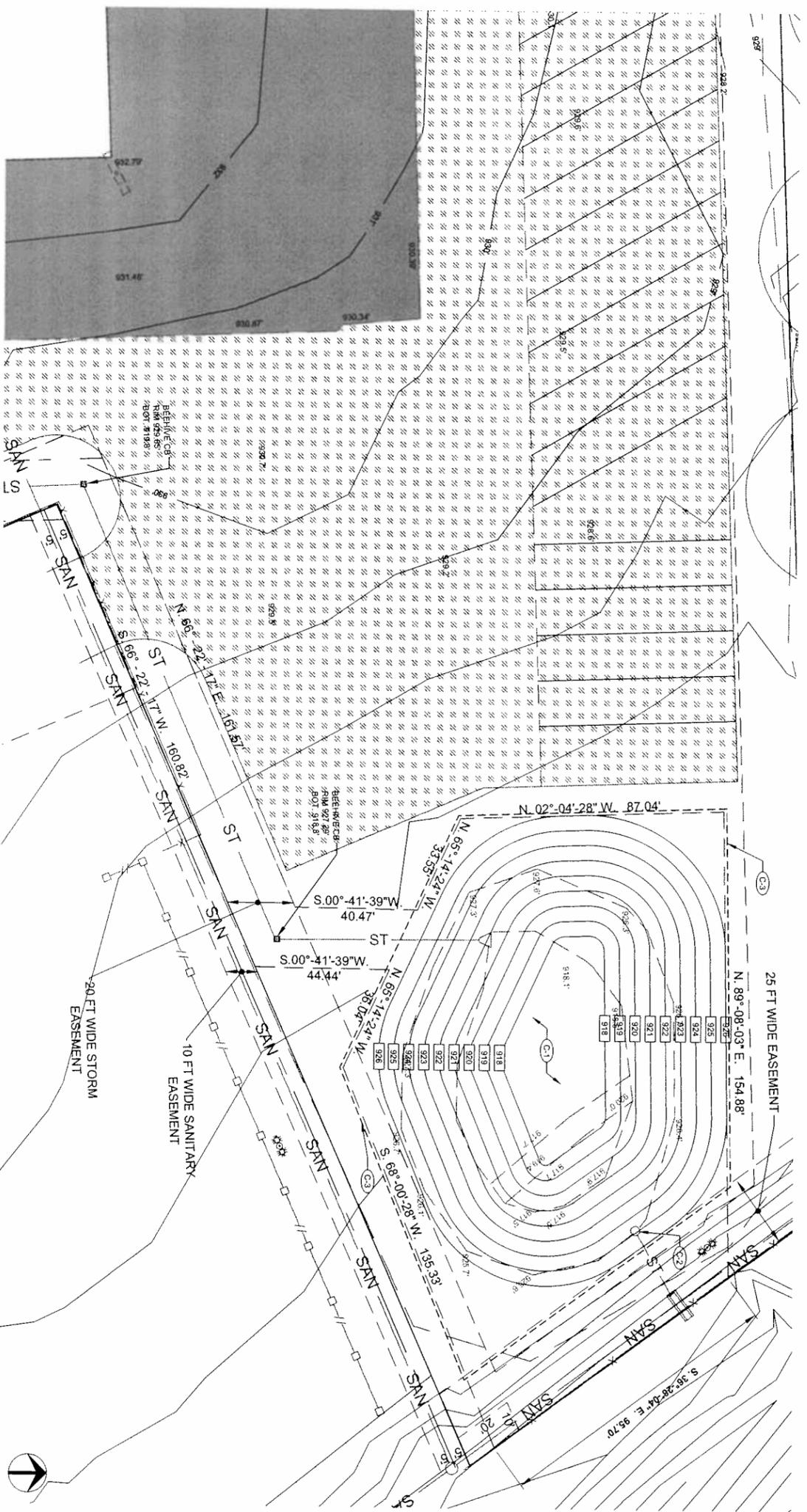
GRADING & PAVING PLAN
SHEET NO. C-300

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600

NOWATZKE TRUCK & TRAILER
6900 Whitmore Lake Rd., Whitmore Lake, MI 48189

DAMRATH GROUP
development support services

Damrath Group, LLC
143 Cozy Centre, #161
Northville, MI 48168
Office: 248.880.2158



Proposed Method: Vertical Curve

Station	Grade (%)	Vertical Curve Length (ft)	Grade (%)
1+00.00	1.31	5.00	5.44
1+05.00	1.31	5.00	5.44
1+10.00	1.31	5.00	5.44
1+15.00	1.31	5.00	5.44
1+20.00	1.31	5.00	5.44
1+25.00	1.31	5.00	5.44
1+30.00	1.31	5.00	5.44
1+35.00	1.31	5.00	5.44
1+40.00	1.31	5.00	5.44
1+45.00	1.31	5.00	5.44
1+50.00	1.31	5.00	5.44
1+55.00	1.31	5.00	5.44
1+60.00	1.31	5.00	5.44
1+65.00	1.31	5.00	5.44
1+70.00	1.31	5.00	5.44
1+75.00	1.31	5.00	5.44
1+80.00	1.31	5.00	5.44
1+85.00	1.31	5.00	5.44
1+90.00	1.31	5.00	5.44
1+95.00	1.31	5.00	5.44
2+00.00	1.31	5.00	5.44

Proposed Method: Parabolic

Station	Grade (%)	Vertical Curve Length (ft)	Grade (%)
1+00.00	1.31	5.00	5.44
1+05.00	1.31	5.00	5.44
1+10.00	1.31	5.00	5.44
1+15.00	1.31	5.00	5.44
1+20.00	1.31	5.00	5.44
1+25.00	1.31	5.00	5.44
1+30.00	1.31	5.00	5.44
1+35.00	1.31	5.00	5.44
1+40.00	1.31	5.00	5.44
1+45.00	1.31	5.00	5.44
1+50.00	1.31	5.00	5.44
1+55.00	1.31	5.00	5.44
1+60.00	1.31	5.00	5.44
1+65.00	1.31	5.00	5.44
1+70.00	1.31	5.00	5.44
1+75.00	1.31	5.00	5.44
1+80.00	1.31	5.00	5.44
1+85.00	1.31	5.00	5.44
1+90.00	1.31	5.00	5.44
1+95.00	1.31	5.00	5.44
2+00.00	1.31	5.00	5.44

Proposed Method: Vertical Curve

Station	Grade (%)	Vertical Curve Length (ft)	Grade (%)
1+00.00	1.31	5.00	5.44
1+05.00	1.31	5.00	5.44
1+10.00	1.31	5.00	5.44
1+15.00	1.31	5.00	5.44
1+20.00	1.31	5.00	5.44
1+25.00	1.31	5.00	5.44
1+30.00	1.31	5.00	5.44
1+35.00	1.31	5.00	5.44
1+40.00	1.31	5.00	5.44
1+45.00	1.31	5.00	5.44
1+50.00	1.31	5.00	5.44
1+55.00	1.31	5.00	5.44
1+60.00	1.31	5.00	5.44
1+65.00	1.31	5.00	5.44
1+70.00	1.31	5.00	5.44
1+75.00	1.31	5.00	5.44
1+80.00	1.31	5.00	5.44
1+85.00	1.31	5.00	5.44
1+90.00	1.31	5.00	5.44
1+95.00	1.31	5.00	5.44
2+00.00	1.31	5.00	5.44

Proposed Method: Parabolic

Station	Grade (%)	Vertical Curve Length (ft)	Grade (%)
1+00.00	1.31	5.00	5.44
1+05.00	1.31	5.00	5.44
1+10.00	1.31	5.00	5.44
1+15.00	1.31	5.00	5.44
1+20.00	1.31	5.00	5.44
1+25.00	1.31	5.00	5.44
1+30.00	1.31	5.00	5.44
1+35.00	1.31	5.00	5.44
1+40.00	1.31	5.00	5.44
1+45.00	1.31	5.00	5.44
1+50.00	1.31	5.00	5.44
1+55.00	1.31	5.00	5.44
1+60.00	1.31	5.00	5.44
1+65.00	1.31	5.00	5.44
1+70.00	1.31	5.00	5.44
1+75.00	1.31	5.00	5.44
1+80.00	1.31	5.00	5.44
1+85.00	1.31	5.00	5.44
1+90.00	1.31	5.00	5.44
1+95.00	1.31	5.00	5.44
2+00.00	1.31	5.00	5.44

SCOPE OF WORK

C. PROPOSED SITE IMPROVEMENTS

- (C-1) EXCAVATE, REMOVE, LEGALLY DISPOSE OF APPROXIMATELY 760 C.Y. FROM DETENTION POND.
- (C-2) INSTALL INLET FILTERS (SEE DETAIL 1 ON SHEET C-500)
- (C-3) INSTALL SILT FENCE (SEE DETAIL 5 ON SHEET C-500)

DETENTION POND VOLUMES

Station	Volume (C.F.)
926 - 14,270.96 C.F.	
925 - 12,175.44 C.F.	
924 - 10,237.00 C.F.	
923 - 8,455.65 C.F.	
922 - 6,831.38 C.F.	
921 - 5,384.18 C.F.	
920 - 4,100.00 C.F.	
919 - 2,901.03 C.F.	
918 - 1,905.08 C.F.	

TOTAL DETENTION PROVIDED = 51,924 C.F.
PLUS 1 FT FREEBOARD

GRADING NOTES

- REFER TO SHEET C-100 FOR EROSION CONTROL, NOTES AND DETAILS.
- VERIFY REQUIRED SPOT ELEVATIONS GRADING IN THE VICINITY OF THE BUILDING WITH THE ARCHITECTURAL PLANS.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN CONFORMANCE WITH THE DRAWINGS AND PROJECT MANUAL, AND WITH LOCAL JURISDICTIONAL AUTHORITY STANDARDS AND SPECIFICATIONS.
- ALL PROPOSED SPOT ELEVATIONS IN PAVED AREAS ARE TO TOP OF PAVEMENT UNLESS NOTED OTHERWISE.
- THE PROJECT SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AT ALL TIMES, ENSURING NO AREAS OF STANDING WATER.
- THE GENERAL CONTRACTOR SHALL, AT HIS OR HER EXPENSE, RESTORE ANY AND ALL STRUCTURES, PIPE UTILITY, PAVEMENT, CURB, SIDEWALKS, LANDSCAPED AREAS, ETC. DISTURBED WITHIN THE SITE AND/OR ADJOINING AREAS DURING DEMOLITION OR CONSTRUCTION SUCH FACILITIES SHALL BE RESTORED TO ORIGINAL OR BETTER, TO THE SATISFACTION OF THE AFFECTED OWNERS(S).
- UNDERGRANIS MAY BE ADDED, IF DETERMINED NECESSARY BY THE GENERAL CONTRACTOR AND AUTHORIZED BY THE OWNERS REPRESENTATIVE, AFTER SUBGRADE IS ROUGH GRADED.
- UNLESS OTHERWISE EXPRESSLY INDICATED HEREON, FINISHED GRADES ARE TO MATCH ADJACENT EXISTING GRADES.
- THE GENERAL CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS. SEE THIS SHEET FOR LIMIT OF DISTURBANCE PROTECT EXISTING TREES TO REMAIN WITH TEMPORARY FENCING PLACED AT THE DRIP LINE NO GROUND DISTURBANCE OR STORAGE OF MATERIAL SHALL OCCUR WITHIN THE DRIP LINE LIMITS, UNLESS HERON ETC. MATERIAL INDICATED OTHERWISE.
- ALL EXCAVATED MATERIALS SHALL BE CLASSIFIED AND THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF EXCESS OR UNSUITABLE MATERIAL, AS WELL AS THE IMPORTATION OF ANY BORROW MATERIAL NECESSARY TO COMPLETE THE PROJECT.
- DETENTION POND TO BE ENLARGED IN ACCORDANCE TO THE WASHNETAW COUNTY RULES AND GUIDELINES - PROCEDURES AND DESIGN CRITERIA FOR STORMWATER MANAGEMENT SYSTEMS.
- TOTAL DISTURBED AREA OF THIS PROJECT IS 1.82 ACRES (79,091.78 S.F.)
- DETENTION POND SHALL BE ENLARGED BY 760 C.Y. TO MEET CURRENT WORK STANDARDS

REVISIONS

REV	DATE	DESCRIPTION
1	12-10-14	DETENTION POND VOLUME
2	12-31-14	REVIEW COMMENTS
3	03-06-15	REVIEW COMMENTS
4	03-13-15	WCRC COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600

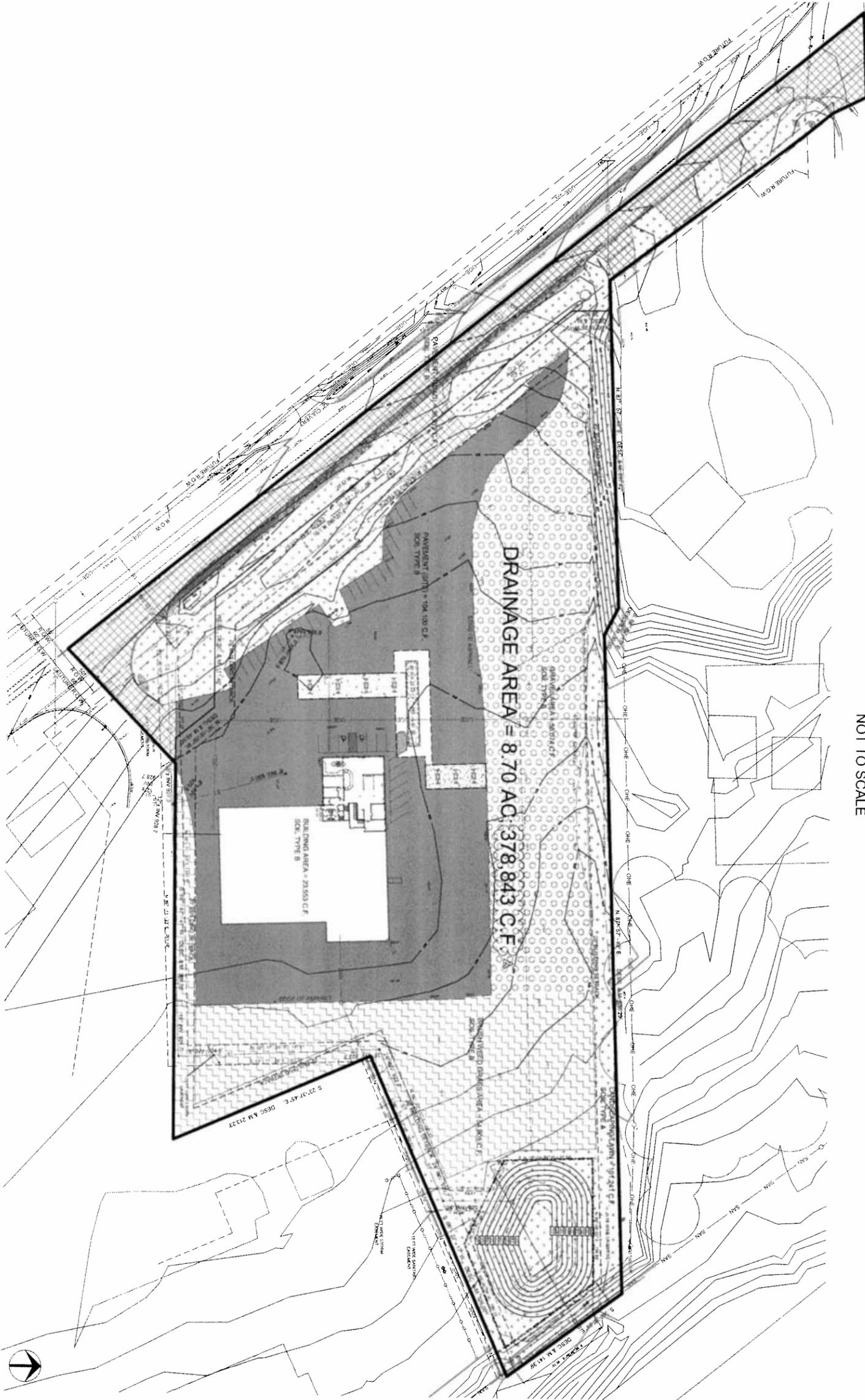
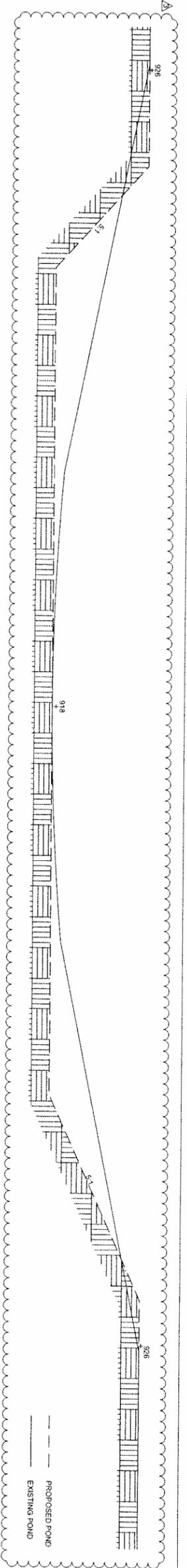
DAMRATH GROUP
development support services

Damrath Group, LLC
143 Cady Centre, #151
Office: 248.880.2158

MISS DIG
BEFORE YOU DIG
CALL
1-800-482-7711

DATE: 12/31/14
PROJECT NO.: 000000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

DETENTION POND
GRADING PLAN
SHEET NO.
C-301



DETENTION POND SECTION A-A
NOT TO SCALE



MISS DIG
BEFORE YOU DIG
1-800-482-7177

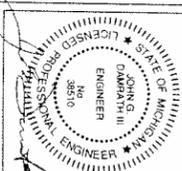
REV	DATE	DESCRIPTION
1	02-28-15	REVIEW COMMENTS
2	03-06-15	REVIEW COMMENTS
3	03-13-15	WCWRC COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600



DAMRATHGROUP
development support services

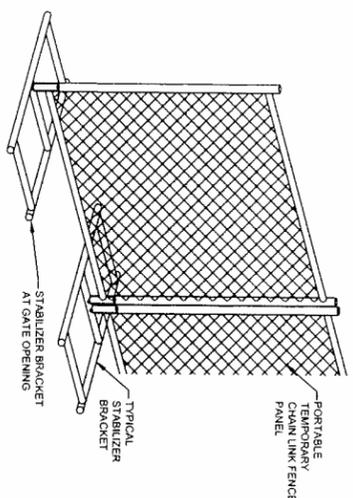
Damrath Group, LLC
143 Cayo Centre, #161
Northville, MI 48167
Office: 248.880.2158



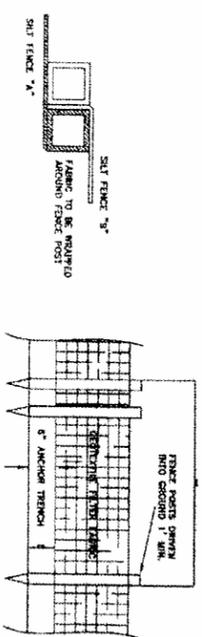
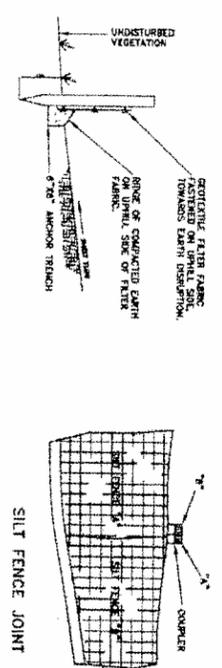
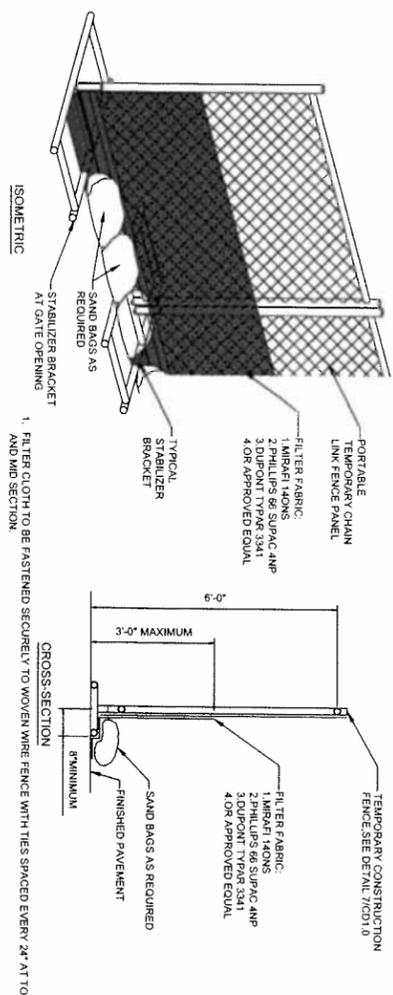
DATE: 12/31/14
PROJECT NO.: 0900000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

STORMWATER MANAGEMENT PLAN
SHEET NO. C-302

4 CONSTRUCTION FENCE
SCALE: NOT TO SCALE

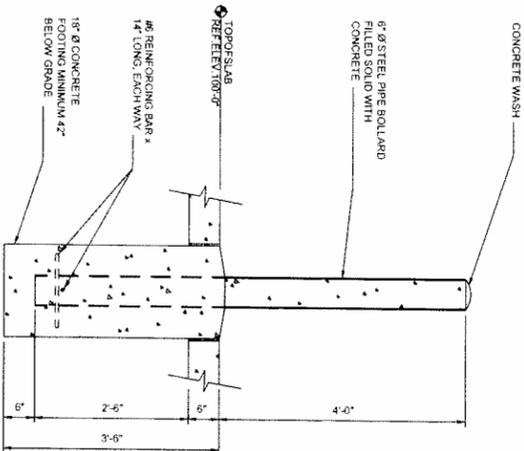


2 SILT FENCE DETAILS
SCALE: NOT TO SCALE

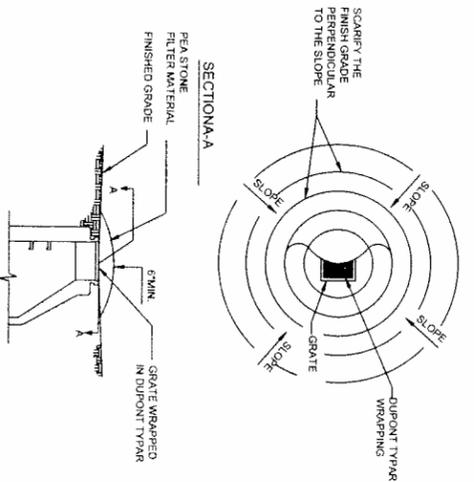


5 SILT FENCE DETAIL
SCALE: NOT TO SCALE

3 BOLLARD DETAIL
SCALE: NOT TO SCALE



1 INLET FILTER DETAIL
SCALE: NOT TO SCALE



REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12-31-14	REVIEW COMMENTS
4	03-13-15	WCWRC COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600

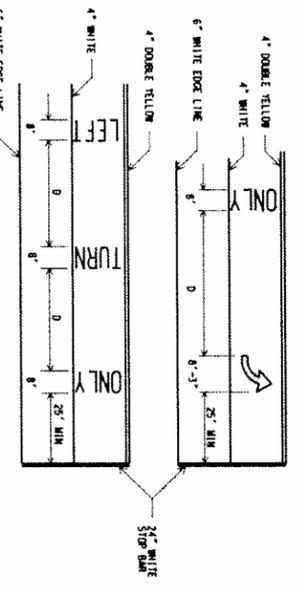
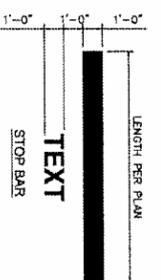
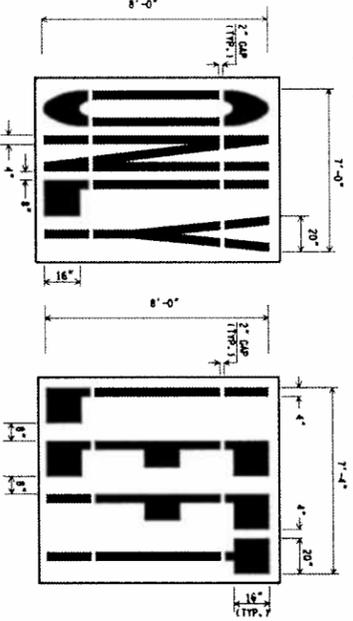


STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
JOHN G. DAMRATH
NO. 2810



DATE: 12/31/14
PROJECT NO.: 000000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD
SITE DETAILS
SHEET NO.
C-500

- NOTES:
1. All letters are 16 inches wide unless noted otherwise.
 2. All gaps between letters are 4 inches unless noted otherwise.
 3. Rectangular area containing legend indicators.
 4. When placed on a super-elevated path, reduce all wheelbase dimensions (width) 2' (0.61m) from the goal by 20%.

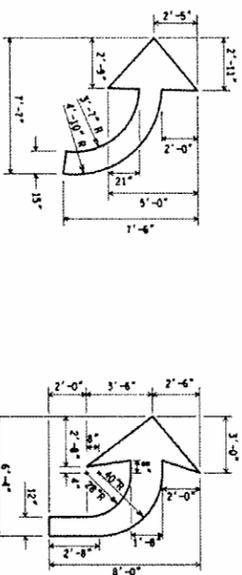


TYPICAL SPACING OF ARROW AND PAVEMENT MESSAGES

POSTED SPEED (MPH)	DISTANCE "D" (FT)
25 AND BELOW	32
30-35	48
40-45	64
50 AND ABOVE	80

- NOTES:**
1. All special markings (arrow, message and symbol) shall be white.
 2. When arrow and pavement message or a used together, the arrow should be located downstream of the pavement message and separated from the pavement message by a distance of "D" measured from the top of the message to the base of the arrow as shown above.
 3. When a series of pavement messages are used, they should be separated by a distance of "D" related to the posted speed, as shown in the table above. All symbols and legends shall be positioned in the center of the lane.

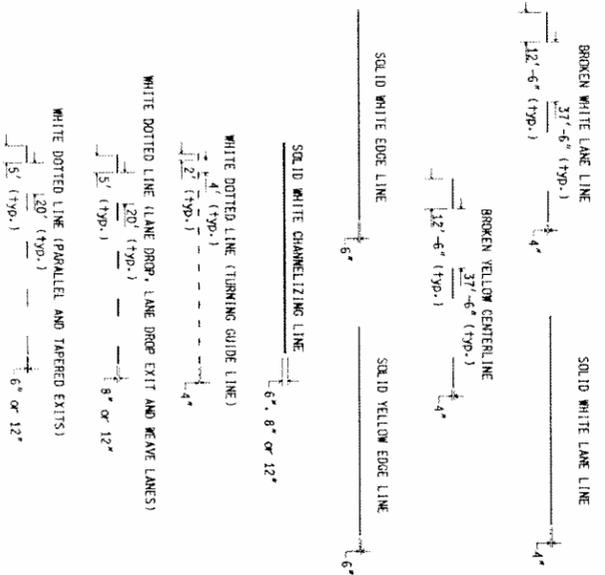
- NOTE: 1. Two sizes for liquid dotted materials on this sheet do not allow gaps.
2. When placed on a super-elevated path, reduce all dimensions by half.
 3. Existing arrow markings may be oriented differently than the shown over-lying arrow. Align the head and stem of the over-lying arrow to fit the existing arrow orientation as practical.
 4. The over-lying arrow is an elongated version of the arrows placed prior to 2014, and as such will extend beyond the footprint of the existing arrow. This is the intent of the over-lying arrow and it should not be trimmed to match existing.



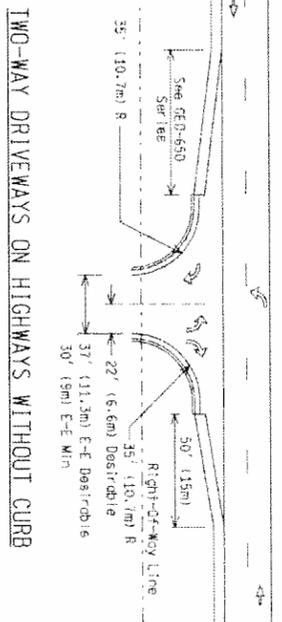
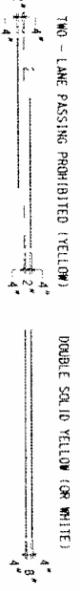
(RIGHT TURN ARROW TO BE REVERSE) ONLY
OR SECOND MARKING APPLICATIONS (OVERLAYS) ONLY
EFFECTIVE BEGINNING 2014 CONSTRUCTION SEASON

(RIGHT TURN ARROW TO BE REVERSE)
FOR NEW APPLICATIONS (NEW PAVEMENT SURFACE OR AFTER GRINDING OF OLD MARKINGS)
EFFECTIVE BEGINNING 2014 CONSTRUCTION SEASON

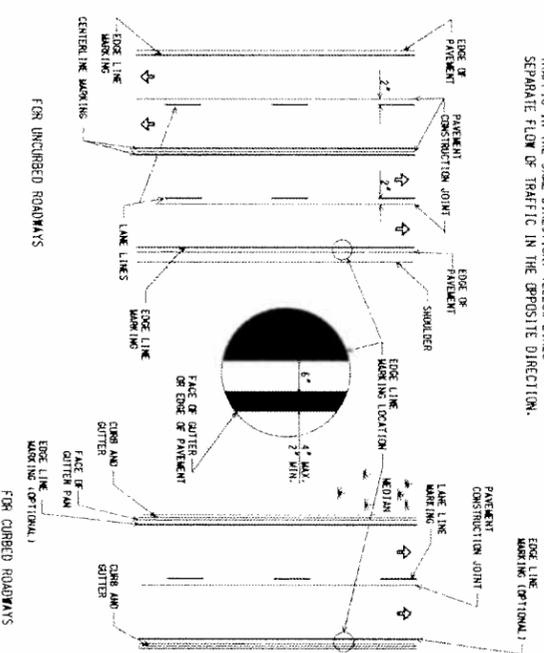
TYPES OF PERMANENT LONGITUDINAL LINES



LINE PATTERNS



BASIC COLOR RULE: WHITE LINES SEPARATE FLOW OF TRAFFIC IN THE SAME DIRECTION, YELLOW LINES SEPARATE FLOW OF TRAFFIC IN THE OPPOSITE DIRECTION.



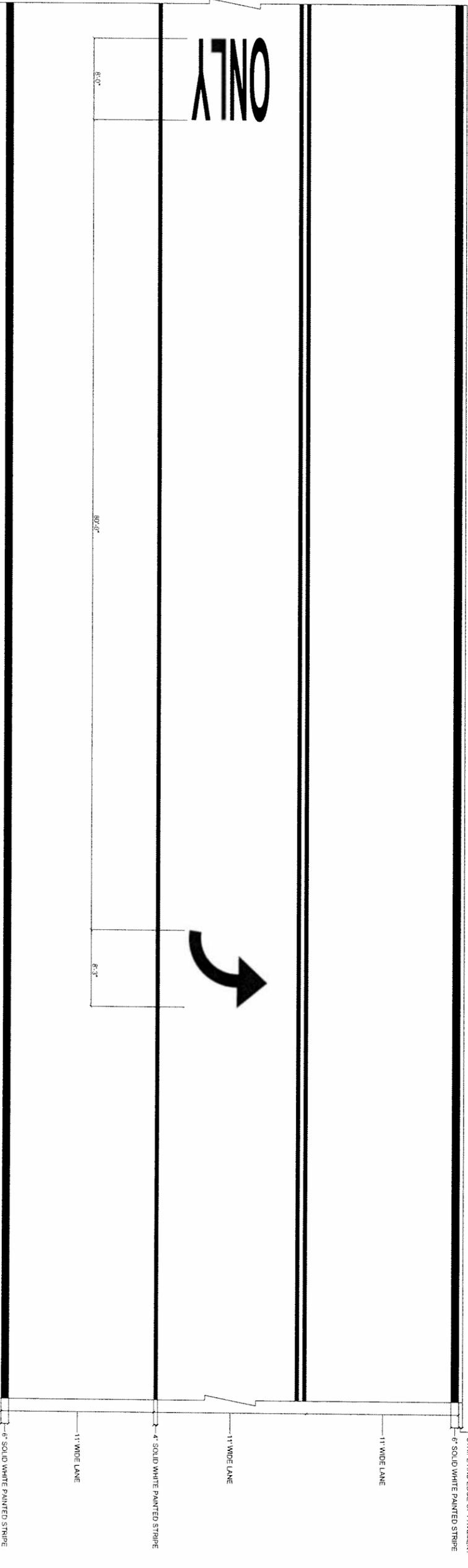
PLACEMENT OF LINES

- NOTES:**
1. On all divided highways, lane lines shall be offset 2 inches from pavement construction joints toward the median side.
 2. On 2-lane, 2-way north-south roadways a broken yellow centerline shall be offset 2 inches to the left of pavement construction joints when facing eastward. Double solid yellow or solid and broken yellow centerlines may straddle the construction joint.
 3. On 2-lane, 2-way east-west roadways, a broken yellow centerline shall be offset 2 inches to the left of pavement construction joints when facing eastward. Double solid yellow or solid and broken yellow centerlines may straddle the construction joint.
 4. When a centerline construction joint does not correspond to the geometric centerline of the roadway for roadway segments over 1/2 mile, place the centerline in the location that will provide lanes of equal width unless directed otherwise by the Engineer.

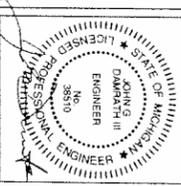
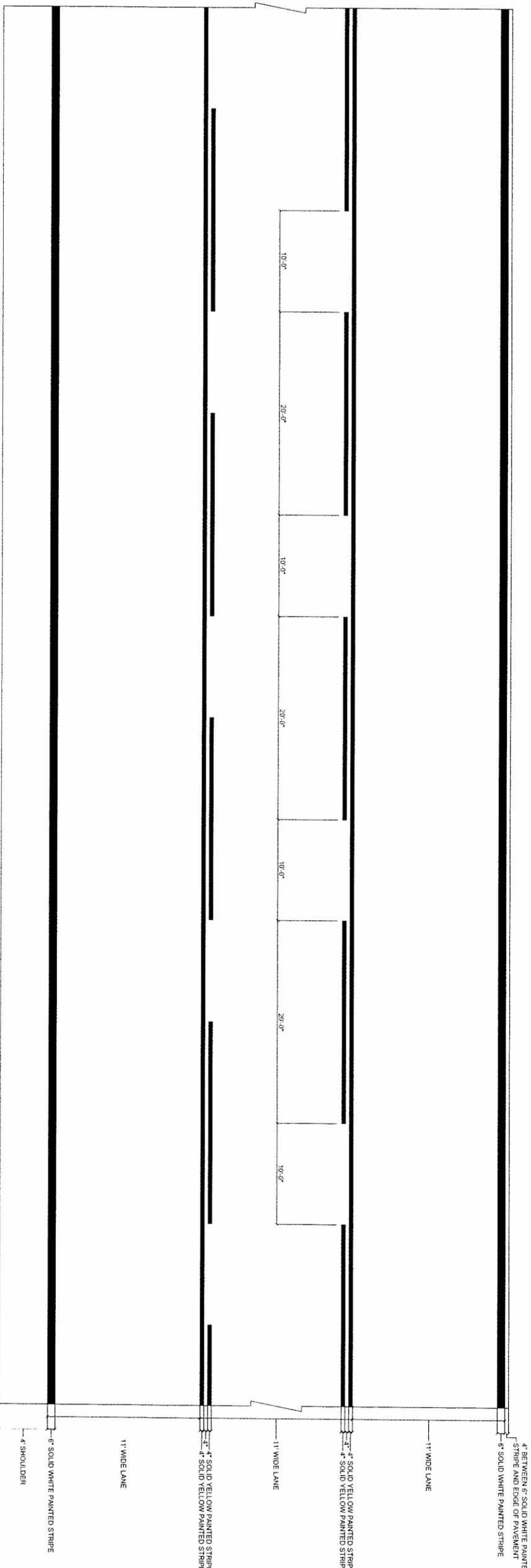
DATE: 12/31/14 PROJECT NO.: 000000 DESIGNED BY: JD DRAWN BY: BH CHECKED BY: JD		REV 1 10/31/14 REVIEW COMMENTS REV 2 12/02/14 REVIEW COMMENTS REV 3 12-31-14 REVIEW COMMENTS	NOWATZKE TRUCK & TRAILER, INC. 6900 WHITMORE LAKE RD. WHITMORE LAKE, MI 48189 (734) 995-9600		DAMRATH GROUP development support services Damrath Group, LLC 143 Candy Centre, #163 Northville, MI 48167 Office: 248.840.2158	
		SHEET NO. C-502				MOOT PAVEMENT DETAILS
		COMMUNICATIONS: 2014 THE DAMRATH GROUP HAS BEEN DESIGNATED AS THE PROVIDER OF THE PROFESSIONAL ENGINEERING SERVICES FOR THIS PROJECT. THE DESIGN OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE ENGINEER. THE CLIENT HAS BEEN ADVISED OF THIS AND HAS ACCEPTED THE DESIGN. THE CLIENT HAS BEEN ADVISED OF THIS AND HAS ACCEPTED THE DESIGN.				



PAVEMENT MARKING PLAN - A
SCALE: NOT TO SCALE

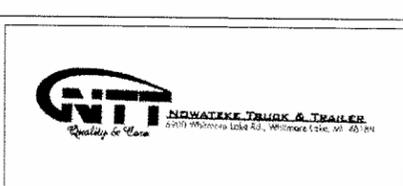


PAVEMENT MARKING PLAN - B
SCALE: NOT TO SCALE



REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12-31-14	REVIEW COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600

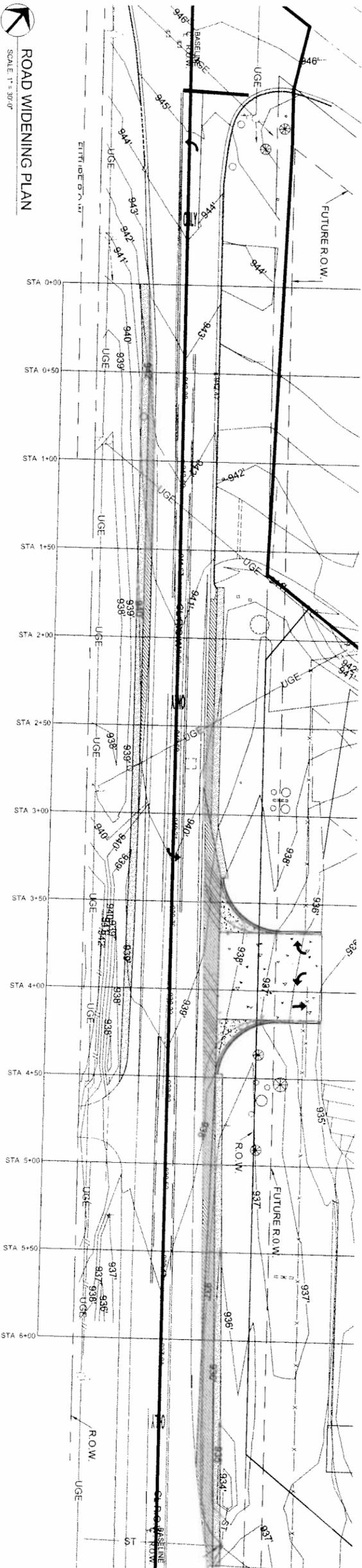


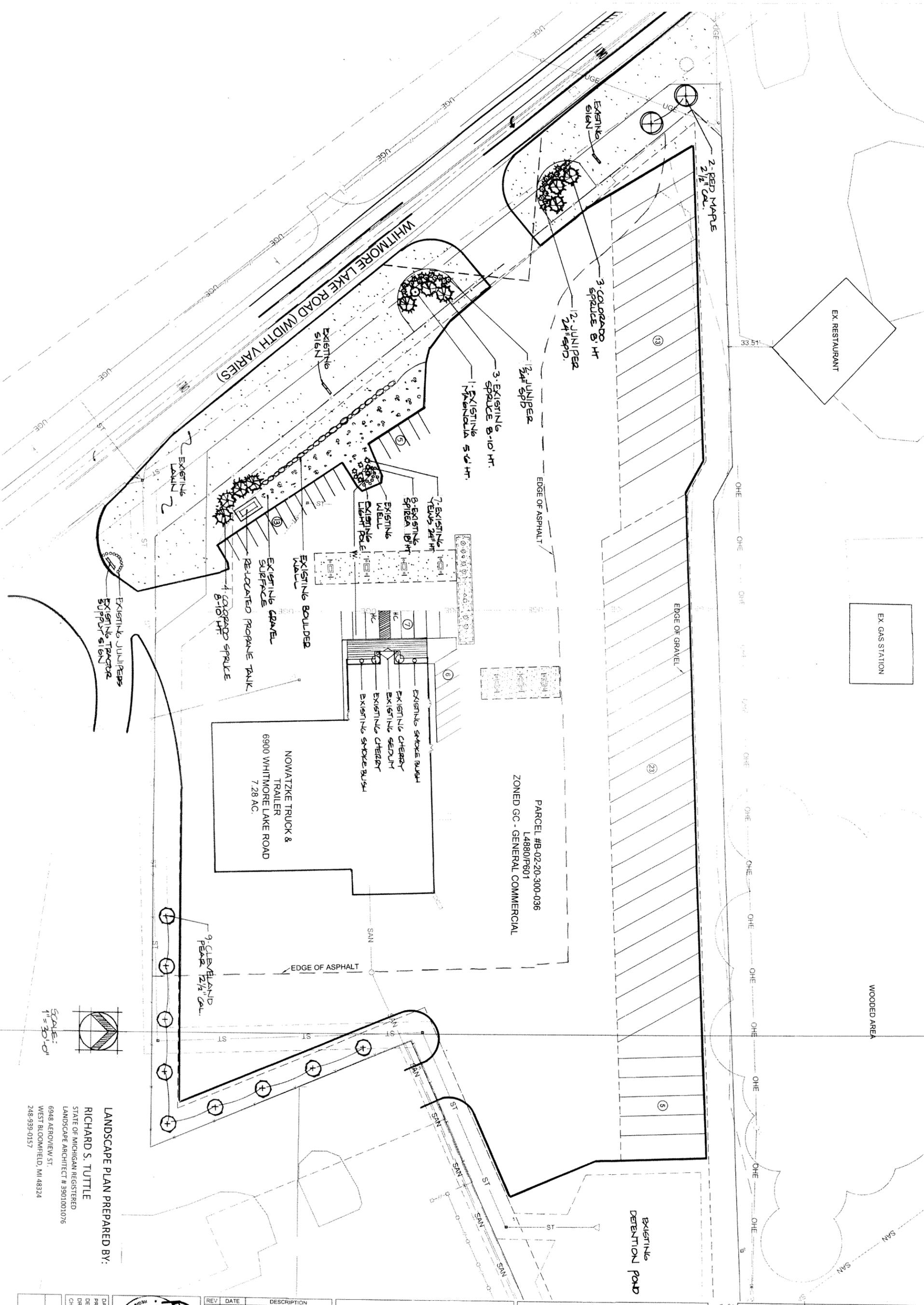
DAMRATH GROUP, LLC
143 Cady Centre, #161
Northville, MI 48167
Office: 248.880.2158



DATE: 12/31/14
PROJECT NO.: 000000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD
PAVEMENT MARKING PLAN
SHEET NO. C-503

ROAD WIDENING PLAN
SCALE 1" = 30' 0"

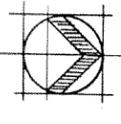




PARCEL #B-02-20-300-036
L4880/PS01
ZONED GC - GENERAL COMMERCIAL

NOWATZKE TRUCK & TRAILER
6900 WHITMORE LAKE ROAD
7.28 AC.

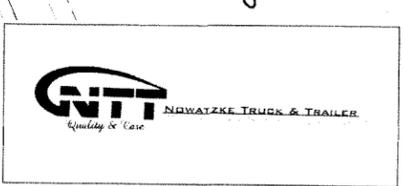
LANDSCAPE PLAN PREPARED BY:
RICHARD S. TUTTLE
STATE OF MICHIGAN REGISTERED
LANDSCAPE ARCHITECT # 3501001076
6948 AEROVIEW ST
WEST BLOOMFIELD, MI 48324
248-935-0157



SCALE:
1" = 30'-0"

REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12-15-14	FINAL REVIEW

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600



DAMRATHGROUP
development support services

Damrath Group, LLC
143 Cady Centre, #151
Northville, MI 48167
Office: 248.880.2158

Professional seal for Richard S. Tuttle, Michigan Registered Landscape Architect No. 1076.

DATE: 11/13/14
PROJECT NO.: 060209
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

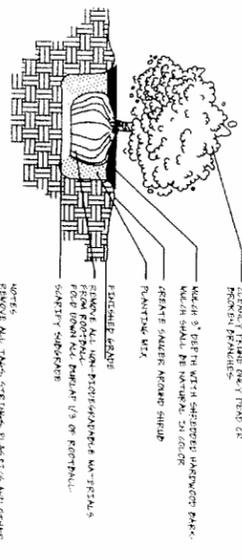
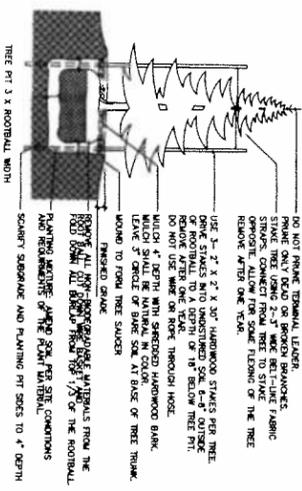
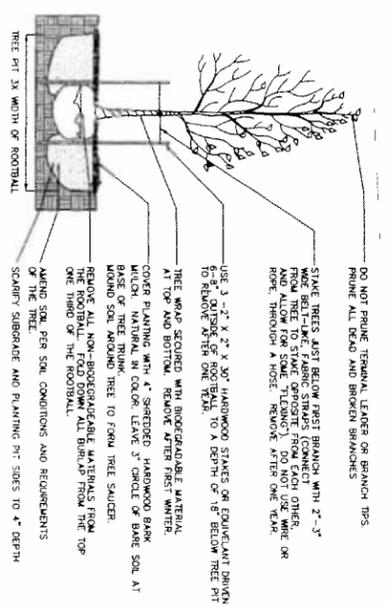
LANDSCAPE PLAN
SHEET NO.
L-100

LANDSCAPE NOTES

1. ALL TREES AND SHRUBS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. ALL PLANT MATERIAL SHALL CONFORM TO THE SPACING AND GRADING STANDARDS OF THE LATEST EDITION OF THE "AMERICAN STANDARDS FOR NURSERY STOCK."
3. ALL TREES AND SHRUBS SHALL BE INSTALLED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS.
4. ALL PLANTING SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF NORTHFIELD TOWNSHIP.
5. ANY SUBSTITUTIONS OF PLANT MATERIAL OR ALTERATION OF SIZES OR LOCATIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. ALL TREES AND EVERGREENS TO BE STAKED GUIDED AND WRAPPED PER DETAILS.
7. ALL TREES IN LAWN AREAS SHALL BE MULCHED WITH 4" WIDE RING OF 4" DEPTH SHREDED BARK MULCH.
8. PLANT BEDS SHALL BE MULCHED WITH 4" DEPTH SHREDED BARK MULCH WITH A PRE-EMERGENT HERBICIDE APPLICATION.
9. ALL TREE PITS SHALL BE DUG 3 TIMES LARGER THAN ROOT BALL. ALL SHRUB PITS SHALL BE DUG 1 FT LARGER THAN ROOTBALL. PLANTING SOIL BACKFILL SHALL CONSIST OF 2 PARTS TOPSOIL AND 1 PART COMPOST.
10. CUT BACK WIRE AND BURIAL FROM TOP 1/3 OF ROOT BALL AND REMOVE. REMOVE ALL TWICE FROM ROOT BALL PRIOR TO PLANTING.
11. ALL TREES AND SHRUBS SHALL BE FERTILIZED AT THE TIME OF PLANTING WITH AGRIFORM SLOW RELEASE FERTILIZER TABS, APPLIED AT MANUFACTURER'S DIRECTIONS.
12. LANDSCAPE CONTRACTOR SHALL CALL "MISS DIG" PRIOR TO PLANTING TO LOCATE AND IDENTIFY ALL UTILITIES.
13. NO TREES, EVERGREENS OR SHRUBS SHALL BE INSTALLED OVER ANY EXISTING OR PROPOSED UTILITY LINES AS SHOWN ON PLANS. SEE ENGINEERING PLANS FOR EXACT UTILITY LOCATIONS.
14. PLANT TREES AND SHRUBS GENERALLY NO CLOSER THAN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS:
SHRUBS: 3 FEET
ORNAMENTAL TREE: 10 FEET
EVERGREEN TREE: 10 FEET
SHRUBS: 2 FEET
15. ALL SHRUB BEDS SHALL BE PREPARED WITH SPECIFIED SOIL MIX AND HERBICIDE APPLICATION BEFORE SHRUB INSTALLATION.
16. ALL DISTURBED AREAS NOT DESIGNATED FOR PAVEMENT OR GRAVING SURFACES SHALL BE RESTORED TO EXISTING CONDITION. ALL AREAS SHALL BE FINE GRADED TO REPRODUCE EXISTING SLOPES AND STONES OVER 1" DIA. AND TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND STRUCTURES. ALL AREAS SHALL HAVE PROPER DEPTH TOPSOIL INSTALLED AND BE SEEDED WITH APPROPRIATE LAWN SEED WITH STRAW COVER.
17. ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH FULLY AUTOMATIC IRRIGATION SYSTEM TO PROPERLY ESTABLISH AND MAINTAIN PLANTS AND LAWNS.
18. ALL PLANT MATERIAL TO BE FULLY GUARANTEED FOR 1 YEAR FROM DATE OF SUBSTANTIAL COMPLETION AND ACCEPTANCE.
19. ALL PLANT MATERIALS SHALL BE FULLY MAINTAINED DURING THE 1 YEAR GUARANTEE PERIOD, INCLUDING WATERING, FERTILIZING, PRUNING, DISEASE CONTROL AND REPLACEMENT IF REQUIRED.
20. ALL OVERCAST AND/OR DAMAGED PLANT MATERIAL SHALL BE REPLACED WITH SAME SPEC SPECIES DURING 1 YEAR GUARANTEE PERIOD.

PLANT LIST

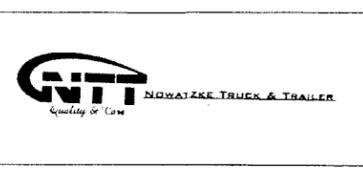
COMMON NAME	SCIENTIFIC NAME	QTY	SIZE	COMMENTS	LOCATION
EXISTING PLANTS					
Cherry tree	Prunus spp.	2	12" H.	tree form	In planters both sides building entry
Small tree	Cornus spp.	2	3" H.	shrub form	In planters both sides building entry
Shrub	Spirea spp.	2	15-18" H.	perennial	In planters both sides building entry
Lowland Spirea	Spirea spp.	2	8-10" H.	perennial tree	Right side entry of Whitmore Lake rd.
Maple	Acer spp.	1	24" H.	overcast	Right side entry of Whitmore Lake rd.
Hydrangea	Hydrangea spp.	1	24" H.	overcast	Right side entry of Whitmore Lake rd.
Hydrangea	Hydrangea spp.	1	24" H.	overcast	Right side entry of Whitmore Lake rd.
Spirea	Spirea spp.	8	15-18" H.	shrub form	Planting per detail
PROPOSED PLANTS					
Colorado Spirea	Spirea spp.	6	8-10" H.	B & B	Along Whitmore Lake rd entry and to screen property (wall)
Red Maple	Acer rubrum	2	2.5" CAL.	B & B	Along south end Whitmore Lake rd.
Creeping Pear	Pyrus calleryana "Graceland select"	9	2.5" CAL.	B & B	Between Whitmore property and Tractor Supply property.
Tim Juniper	Juniperus sibirica "Transworld"	24	24" H.	Container	Both sides of entrance on Whitmore Lake rd.



LANDSCAPE PLAN PREPARED BY:

RICHARD S. TUTTLE
STATE OF MICHIGAN REGISTERED
LANDSCAPE ARCHITECT # 3901001076
6948 AEROVUE ST.
WEST BLOOMFIELD, MI 48324
248-539-0157

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600



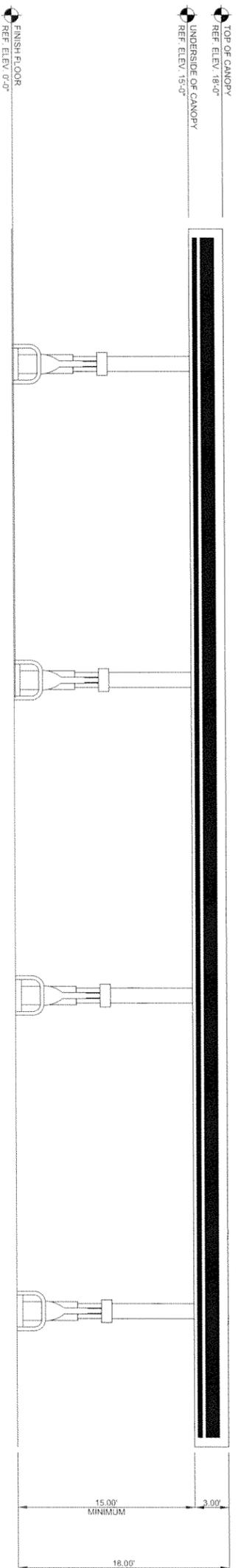
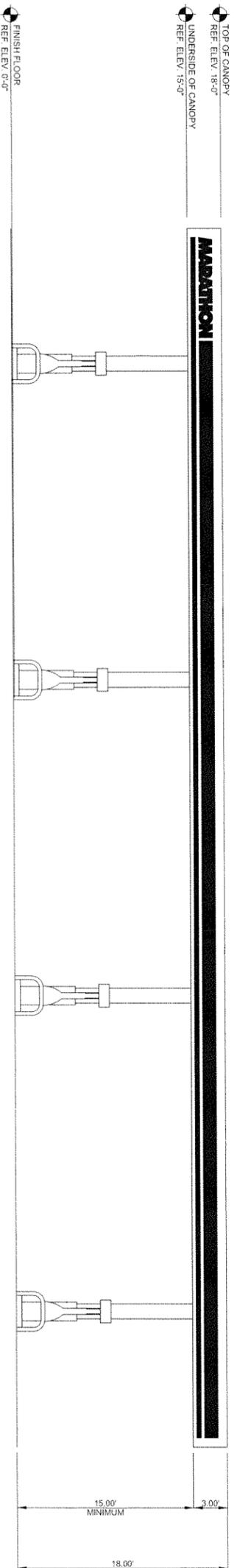
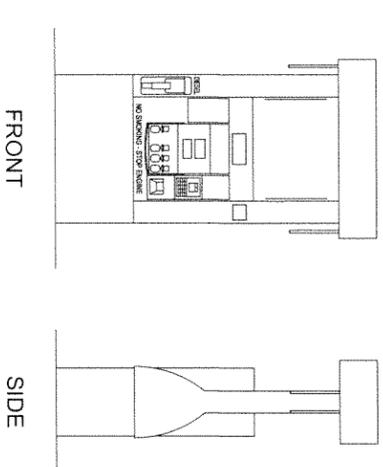
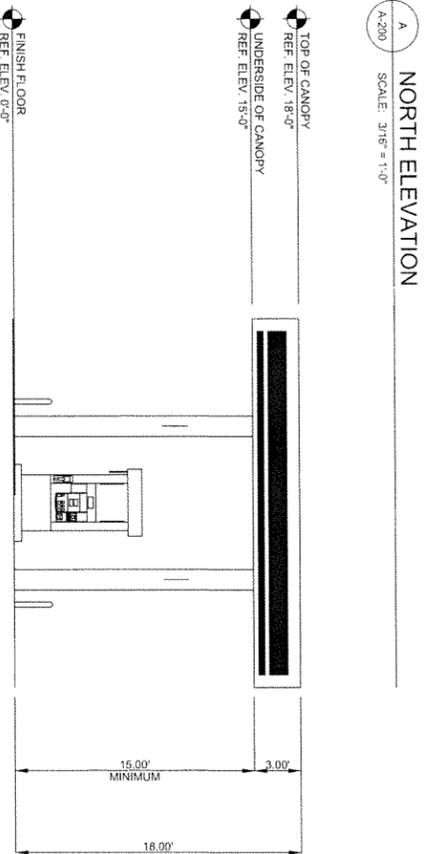
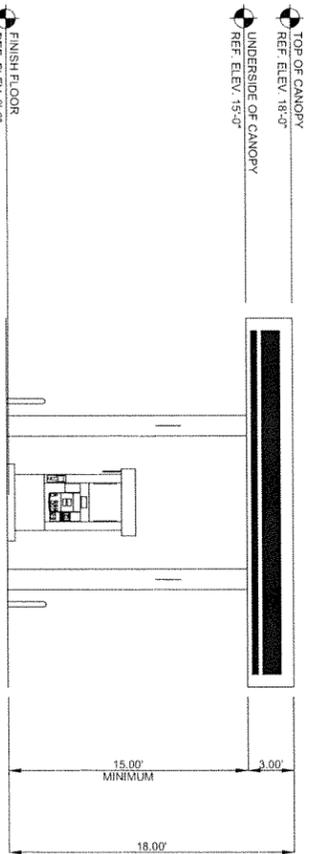
DAMRATH GROUP
Development Support Services

Damrath Group, LLC
143 Cady Centre, #151
Northville, MI 48167
Office: 248.880.2169

REV	DATE	DESCRIPTION
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2	12-15-14	TRP REVISED

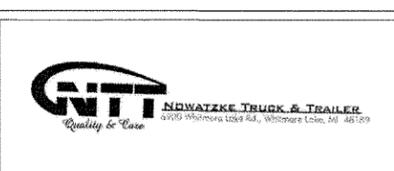
RICHARD S. TUTTLE
LANDSCAPE ARCHITECT
NO. 1076

DATE	11/13/14
PROJECT NO.	000090
DESIGNED BY	JD
DRAWN BY	BM
CHECKED BY	JD
LANDSCAPE PLAN	
SHEET NO.	L-101



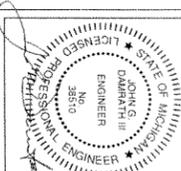
REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12/31/14	REVIEW COMMENTS
4	03/10/15	REVIEW COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
 6900 WHITMORE LAKE RD.
 WHITMORE LAKE, MI 48189
 (734) 995-9600



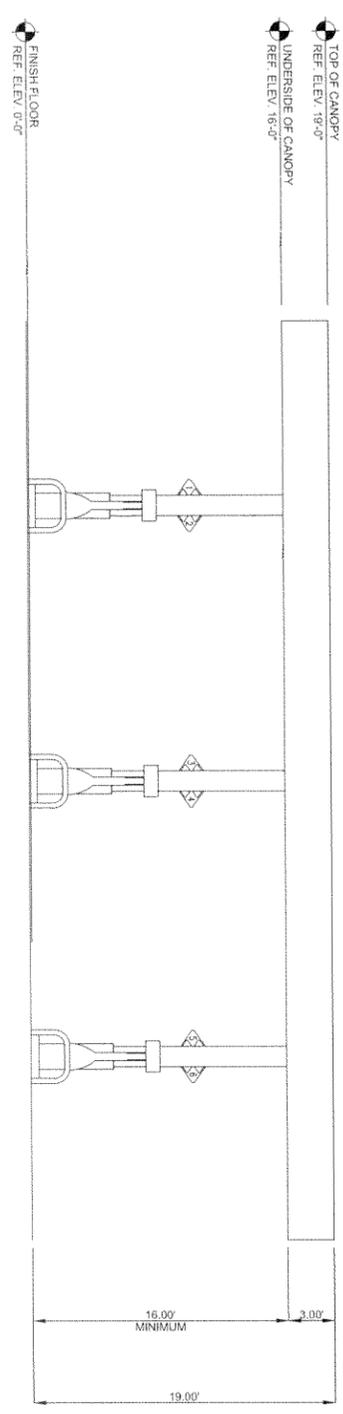
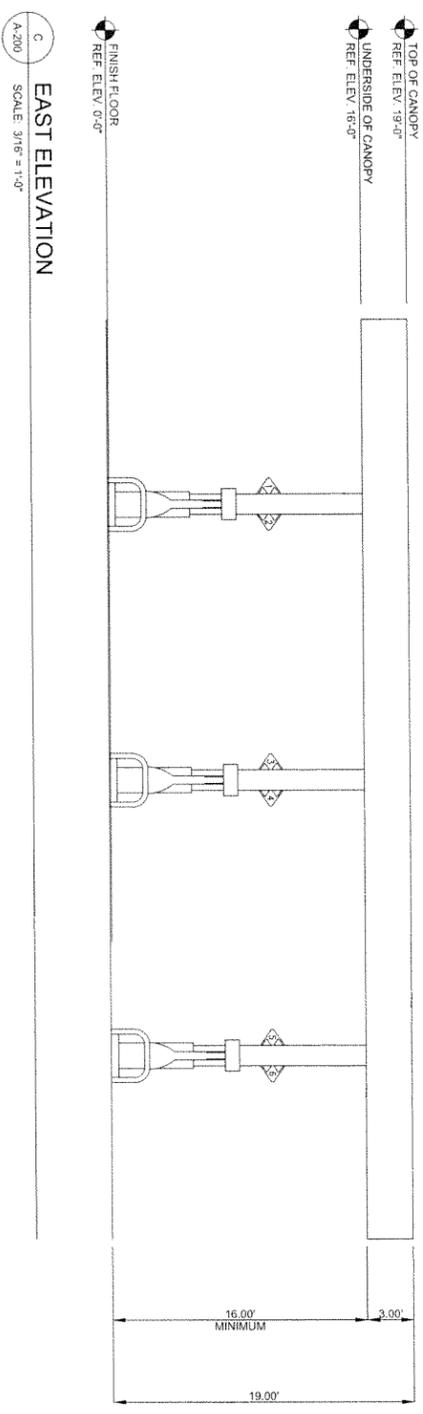
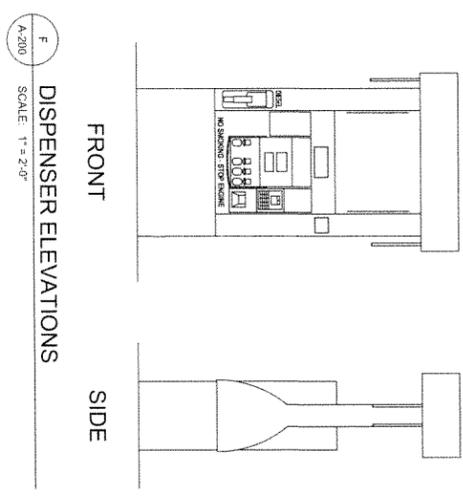
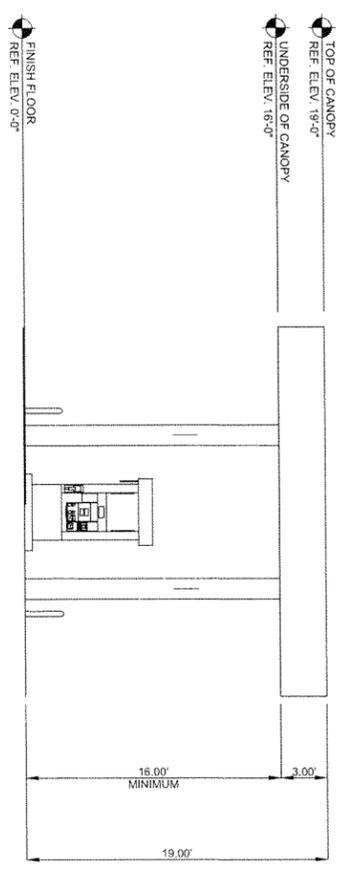
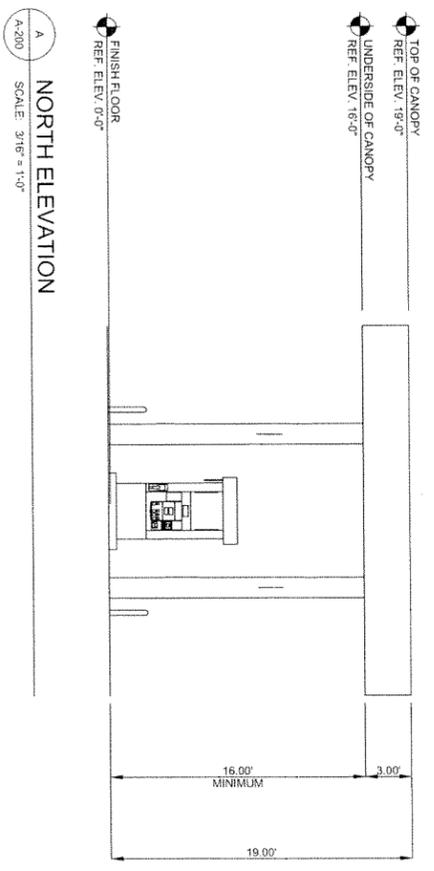
4210 95th Street, Suite 101, Westshore Center, MI 48129

DAMRATH GROUP
 development support services
 Damrath Group, LLC
 143 Cady Centre, #151
 Northville, MI 48167
 Office: 248.880.2155



DATE: 12/31/14
 PROJECT NO.: 000000
 DESIGNED BY: JD
 DRAWN BY: BH
 CHECKED BY: JD

GAS CANOPY
 ELEVATIONS
 SHEET NO.
A-201



REV	DATE	DESCRIPTION
1	10/31/14	REVIEW COMMENTS
2	12/02/14	REVIEW COMMENTS
3	12-31-14	REVIEW COMMENTS

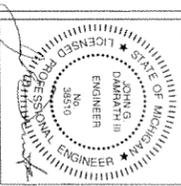
NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600



DAMRATH GROUP
development support services

Damrath Group, LLC
143 Cady Centre, #151
Northville, MI 48167
Office: 248.880.2188

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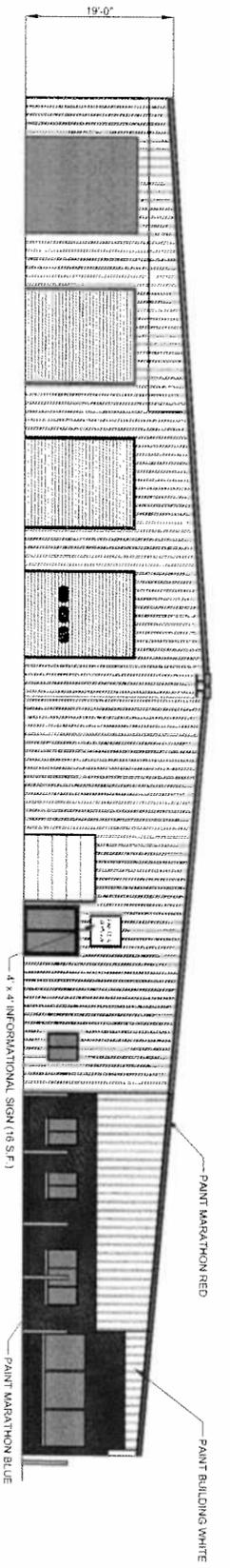
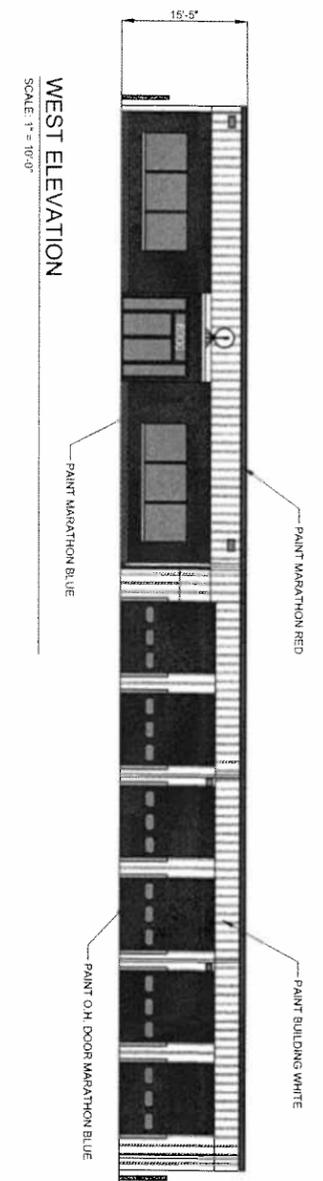
DATE: 12/31/14
PROJECT NO.: 000000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

DIESEL CANOPY
ELEVATIONS
SHEET NO.
A-202

DATE: 12/31/14
 PROJECT NO.: 000000
 DESIGNED BY: JD
 DRAWN BY: BH
 CHECKED BY: JD

DAMRATHGROUP
 development support services

Damrath Group, LLC
 143 OakCentre, 8751
 Northville, MI 48167
 Office: 248.840.2158

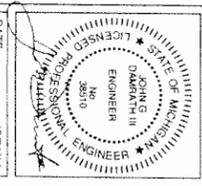
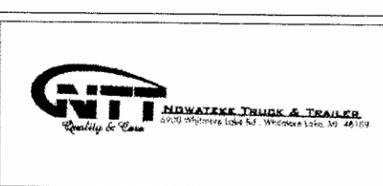


NORTH ELEVATION
 SCALE: 1" = 10'-0"

WEST ELEVATION
 SCALE: 1" = 10'-0"

REV	DATE	DESCRIPTION
1	12/31/14	REVIEW COMMENTS

NOWATZKE TRUCK & TRAILER, INC.
 6900 WHITMORE LAKE RD.
 WHITMORE LAKE, MI 48189
 (734) 995-9600



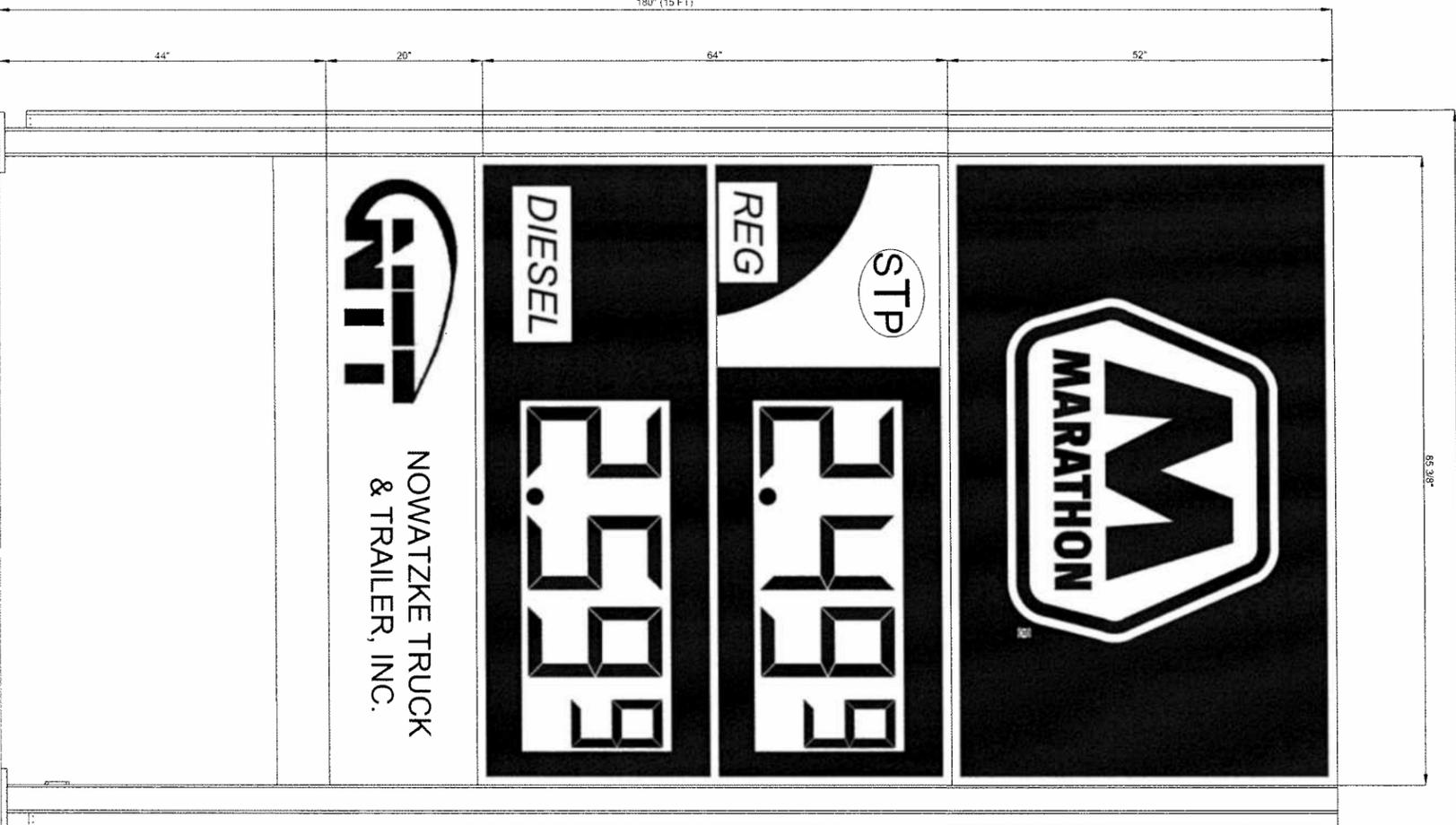
DATE: 12/31/14
 PROJECT NO.: 000000
 DESIGNED BY: JD
 DRAWN BY: BH
 CHECKED BY: JD

BUILDING ELEVATIONS
 SHEET NO.
 A-203

99' (7:11)

85.98'

180' (15 FT)



ID/PRICE SIGN (80 S.F.)
NOT TO SCALE

DAMRATHGROUP
development support services

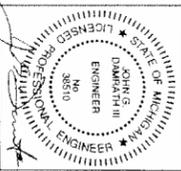
Damrath Group, LLC
143 Cady Centre, #161
Northville, MI 48167
Office: 248.880.2168

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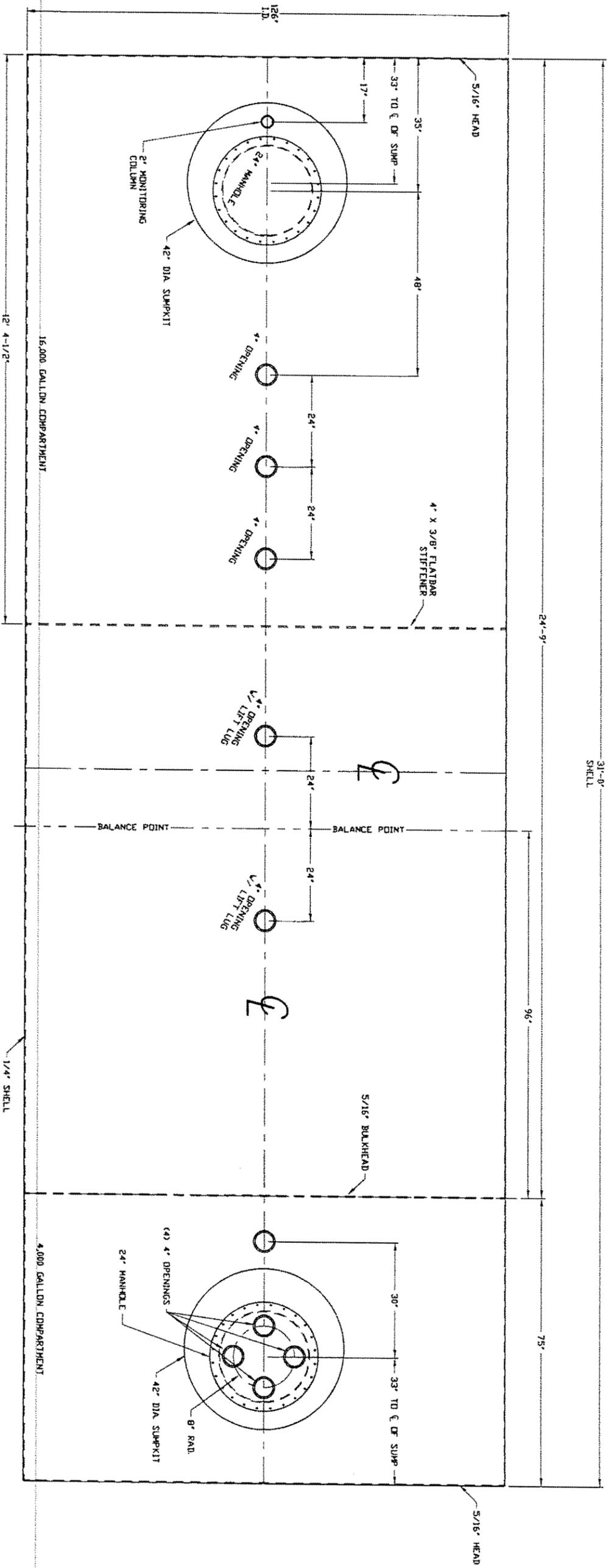
NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600

REV	DATE	DESCRIPTION
1	12/31/14	REVIEW COMMENTS



DATE: 1/23/14
PROJECT NO.: 000000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

SIGN DETAILS
SHEET NO.
AG-100



NOTE: WEAR PLATES INSTALLED UNDER ALL OPENINGS
PLAN VIEW

31'-0" SHELL

96'

75'

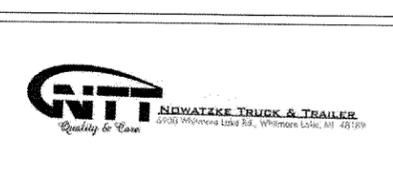


DATE: 12/31/14
 PROJECT NO.: 000000
 DESIGNED BY: JD
 DRAWN BY: BH
 CHECKED BY: JD

20,000 GALLON TANK PLAN
 SHEET NO. T-300

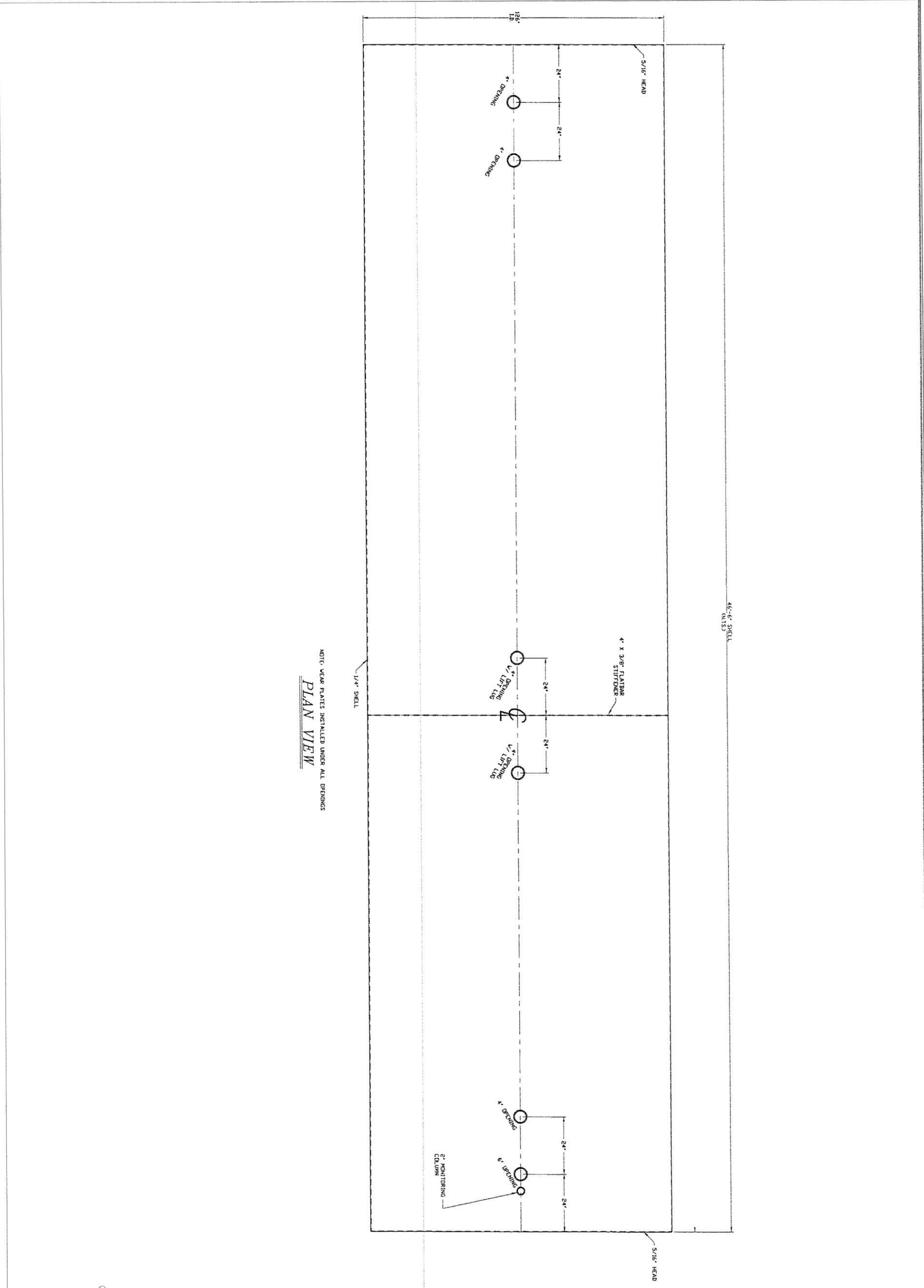
REV	DATE	DESCRIPTION

NOWATZKE TRUCK & TRAILER, INC.
 6900 WHITMORE LAKE RD.
 WHITMORE LAKE, MI 48189
 (734) 995-9600



DAMRATHGROUP
 development support services

Damrath Group, LLC
 143 Cady Centre, #151
 Northville, MI 48167
 Office: 248.880.2158



NOTE: WEAR PLATES INSTALLED UNDER ALL OPENINGS
PLAN VIEW

46'-6" SHELL
(N=13)

DAMRATHGROUP
development support services

Damrath Group, LLC
143 Cady Centre, #151
Northville, MI 48167
Office: 248.880.2158

NTI
NOWATZKE TRUCK & TRAILER
Quality & Care

6900 Whitmore Lake Rd., Whitmore Lake, MI 48189
(734) 995-9600

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600

REV	DATE	DESCRIPTION

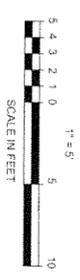
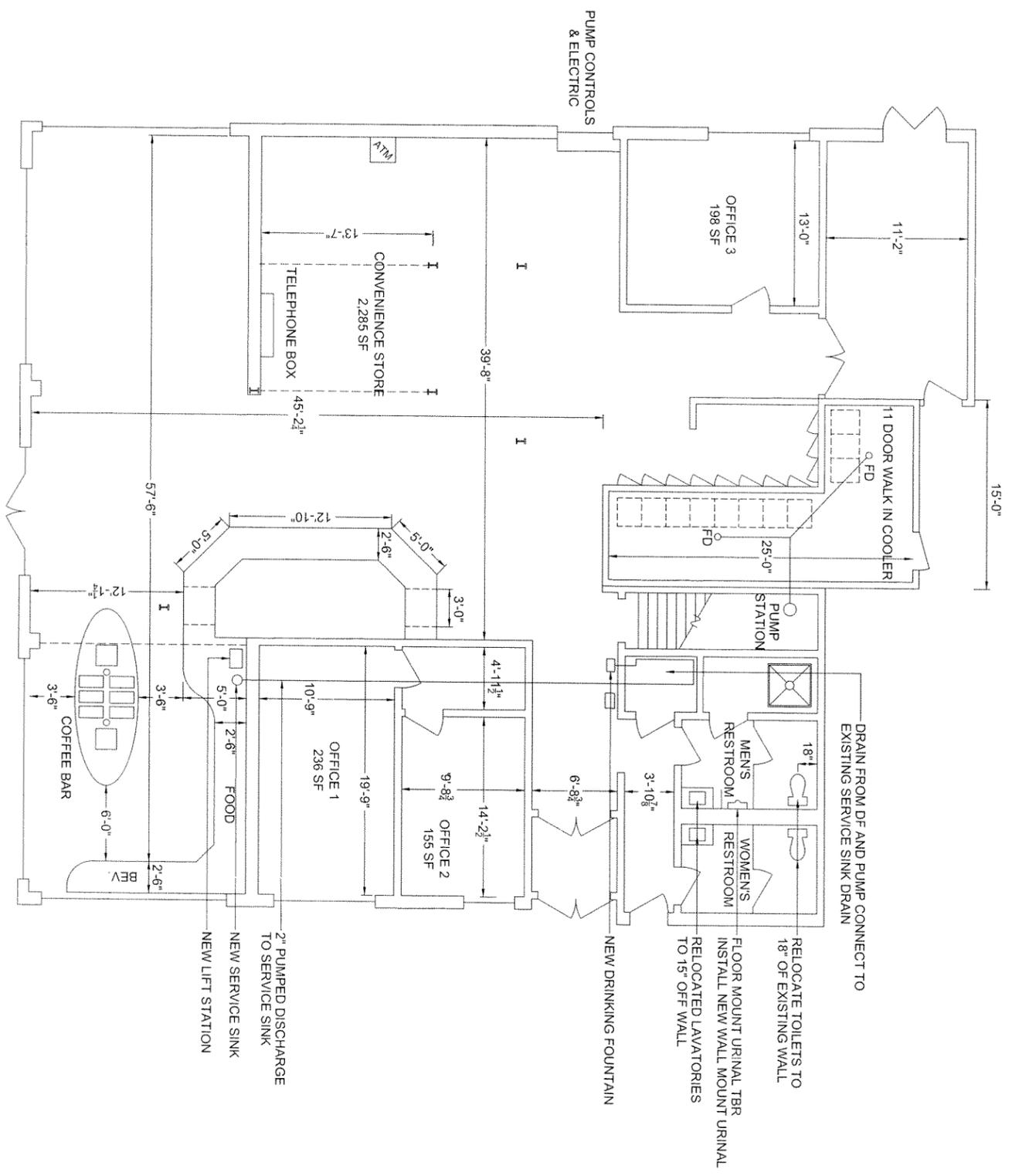
STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
JOHN G. DAMRATH III
ENGINEER
NO. 3530

DATE: 12/31/14
PROJECT NO.: 0800000
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

36,000 GALLON
TANK PLAN

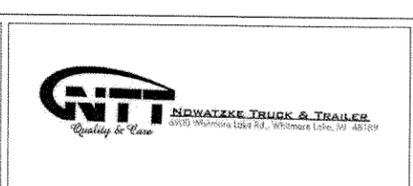
SHEET NO.
T-301

FLOOR PLAN
SCALE: 1" = 8'-0"



REV	DATE	DESCRIPTION
1	02-19-15	CLIENT CHANGES

NOWATZKE TRUCK & TRAILER, INC.
6900 WHITMORE LAKE RD.
WHITMORE LAKE, MI 48189
(734) 995-9600



DAMRATH GROUP
development support services

Damrath Group, LLC
143 Cady Centre, #151
Northville, MI 48167
Office: 248.880.2158

STATE OF MICHIGAN
LICENSED PROFESSIONAL ENGINEER
JOHN G. DAMRATH III
ENGINEER
NO. 38510

DATE: 11/26/14
PROJECT NO.: 090006
DESIGNED BY: JD
DRAWN BY: BH
CHECKED BY: JD

FLOOR PLAN
SHEET NO.
A-3



CARLISLE WORTMAN
associates, inc. 605 S. Main Street, Ste. 1
Ann Arbor, MI 48104
(734) 662-2200
(734) 662-1935 Fax

MEMORANDUM

TO: Northfield Township Planning Commission
FROM: Douglas J. Lewan, Community Planner
DATE: April 8, 2015
RE: Citizen Survey Proposals

Please find attached the citizen survey proposal the Township received. We sent this request out to seven firms and received this proposal to date. As the deadline for proposal submission has passed we need to decide if we want to move forward with the single bid or to re-issue the request to additional firms.

Please read through the attached proposal and be prepared to discuss this topic at our meeting on the 15th. Should you have any questions about this proposal or its contents please don't hesitate to call.



CARLISLE WORTMAN ASSOC., INC.
Douglas J. Lewan, PCP, AICP
Principal

April 2, 2015

Marlene Chockley
Chair
Planning Commission
Northfield Township
8350 Main Street
Whitmore Lake, MI 48189

Dear Ms. Chockley:

Communities use many forms of research to decide what they should do and how they should grow. In 2010-2012, Northfield Township used planning fairs, a mailed survey and public hearings that resulted in the master plan approved in July of 2012.

Even the most prescient master plan, though, may not anticipate all the possibilities that development proposals may bring to the table. The plan itself acknowledges that uncertainty, saying “As this Master Plan is being written in 2010-2011, during one of the most difficult economic downturns in the history of the State and nation, many of the previous population and housing projections for this area are uncertain ... A change in the economic forecasts of this region (either up or down) will change the projections and some of the assumptions contained in these pages.”

In fact, residential development is booming throughout southeast Michigan. A developer has approached the township to build 800-1,200 units on 460 acres in the primarily agricultural southwest corner of the township and has proposed an amendment to the master plan.

The township’s most active and vocal citizens are divided on the merits of the proposal. Its leaders recognize that an objective, quantitative survey of a representative sample of all township residents is the best way to make a decision.

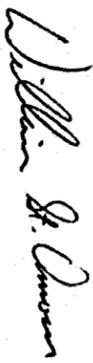
Cobalt Research has conducted research studies for more than 100 municipalities, school districts, institutions and corporations. Our work has enabled communities to make data-driven decisions with confidence.

- When the city of Royal Oak asked voters if they would support a modest tax increase dedicated to maintain and reconstruct local roads, 57 percent of the respondents said “Yes.” A November, 2014 vote for up to 2.5 mils for streets was supported by 54 percent of the voters.
- The city of Walla Walla, WA had been unable to pass a package of funding for a municipal pool, although this was a major concern for residents. A 2014 survey identified the most desired pool features and the voters’ preferred funding mechanism, and a February, 2015 ballot initiative passed 64%-36%.
- Kalamazoo Township’s survey showed that residents’ top priority was road repair. That gave the township the confidence to request a \$10 million road improvement bond in February 2015, which was approved 935-614.

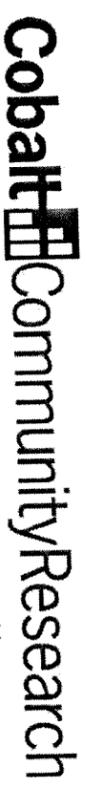
In this endeavor, Cobalt is partnering with Sharlan Douglas of Douglas Communications Group, who combines 30+ years of experience as a public relations consultant with nine years as a planning commissioner and her most recent position as a Royal Oak city commissioner.

Ms. Douglas's ability to generate consensus and manage projects in the public arena combined with our deep experience in municipal research make us the ideal team to meet Northfield Township's current challenge.

Sincerely,

A handwritten signature in black ink, appearing to read "William S. Amour". The signature is written in a cursive style with a large initial "W".

William SaintAmour
Executive Director



supporting decisions | inspiring ideas

NORTHFIELD TOWNSHIP, MI

PROPOSAL FOR RESEARCH

April 2, 2015

Submitted by:

William SaintAmour
Executive Director
1134 Municipal Way
Lansing, MI 48917

T: (877) 888-0209
F: (517) 703-9704

E-mail: wsaintamour@cobaltcommunityresearch.org

Nondisclosure Statement: All materials contained in this agreement are the confidential and proprietary property of Cobalt Community Research. The information contained herein is provided by Cobalt Community Research for evaluation by the Partner. Dissemination to other parties is prohibited.

COBALT EXPERIENCE AND BACKGROUND

Cobalt Community Research (Cobalt) is a national 501c3 nonprofit organization with a mission to provide research and educational tools that help schools, local governments and other nonprofit organizations across the United States thrive as changes emerge in the economic, demographic and social landscape. Cobalt is located at 1134 Municipal Way, Lansing, Michigan 48917, (877) 888-0209; F: (517) 703-9704; E-mail: wsaintamour@cobaltcommunityresearch.org.

Incorporated in 2007, Cobalt Community Research is a nonprofit research coalition created to give governmental organizations and other associations access to high-quality research at a more reasonable rate through pooling than what is available in the private sector. Cobalt project leads are current public sector practitioners who provide their expertise to improve engagement and alignment between governmental units and the people they serve. Cobalt is the only national nonprofit research coalition in the United States.

Cobalt has been very active in providing research services to local units of government. Projects include the City of Allentown (PA), Luna County (NM), City of Brookfield (WI), City of Copperas Cove (TX), City of Janesville (WI), City of Las Vegas (NV), City of Lakeland (FL), City of Oak Creek (WI), City of Rocky Mount (NC), City of Roseville (MN), City of Warren (MI), City of Wausau (WI) and Saint Clair County (MI). Cobalt provides proprietary sampling, questions and analysis with the ability to add custom questions that meet partnering organizations' specific needs. This provides them with clear, action-oriented insight on funding priorities, quality of life and the services that citizens value.

An important element of the program Cobalt offers are the annual benchmarks we produce. Each year, Cobalt conducts an annual random survey of residents across the United States. This information is used to create more than 80 benchmarks, each of which can be filtered by demographic factors such as age, educational level, gender, work location, household composition, income and more. In addition, these annual benchmarks are developed for individual states, Census regions, the United States overall and also for similarly sized communities across the region and country. This information, along with our unique insight into local government, offers important insight for budgeting and economic development. The coalition offers the only annual, scientifically-generated benchmarking study of citizen perception and engagement in the country. The resulting scientific index provides a more stable reference frame to compare against over time.

Cobalt is a unique coalition offering scientifically rigorous research, customization, actionable analysis and robust benchmarks unlike anything else available to local governments.

QUALIFICATIONS AND EXPERIENCE OF THE PROJECT TEAM

Cobalt provides research services that comply with generally accepted research principles. In addition, projects and services will be led by Cobalt staff certified by the Market Research Association's Professional Researcher Certification (PRC) program, which is endorsed by major national and international research organizations such as the AMA (American Marketing Association), the ARF (Advertising Research Foundation), CMOR (Council of Marketing and Opinion Research), IMRO (Interactive Marketing Research Organization), MRII (Marketing Research Institute International), the RIVA Training Institute and the Burke Institute.

The head of research will be William SaintAmour. He serves as research director at the Municipal Employees' Retirement System of Michigan (MERS) and as executive director of Cobalt Community Research. He also has

served the State of Michigan Department of Management and Budget, the Michigan Office of Retirement Services and ADP. He has worked in the research and communications fields for more than 25 years.

Mr. SaintAmour earned an executive certificate from the University of Michigan Ross Business School, a master's degree from Michigan State University and a bachelor's degree from the University of Michigan in Dearborn. He has Certificates of Achievement in Public Plan Policy in employee health and employee pensions and holds the professional research certificate from the Market Research Association.

The project will be coordinated by Sharlan Douglas, president of Douglas Communications Group, a public relations consultancy. She spent nine years on the Royal Oak Planning Commission until being elected to the city commission in 2013. She is the current president of the Michigan Association of Planning.

Ms. Douglas was the founding executive director of the Eight Mile Boulevard Association and the CEO of a chamber of commerce following 30 years in public relations, marketing and fund development. She has facilitated community visioning processes for two cities and managed opinion research projects for several state trade and professional associations. Ms. Douglas received a BA in journalism from Michigan State University and has completed the course work for a master's degree in urban planning at Wayne State University. She is accredited by the Public Relations Society of America.

Analysis, compilation and preparation of results will be conducted by research analyst Pete Charette. Mr. Charette holds the Professional Researcher Certificate from the Market Research Association, has earned a Market Research Certificate from the University of Georgia and holds a bachelor's degree in business administration from Western Michigan University. In addition to his work with communities such as the City of Wausau (WI), City of Las Vegas (NV), City of Lakeland (FL) and the City of Wayne (MI), Mr. Charette has also worked with the Grosse Pointe Chamber of Commerce and the five Grosse Pointe communities. He has over seven years of experience with local governments.

Sampling and logistics will be conducted by Billie Harris. Ms. Harris holds a bachelor's and master's degrees from Michigan State University and is experienced in data collection methodology and sample design. She has worked on projects that include the Michigan Office of Retirement Services, City of Lakeland (FL), City of Las Vegas (NV) and Luna County (NM). Ms. Harris has more than nine years of experience with local governments.

COBALT'S DELIVERABLES

The results of the project report will include the following:

- Executive summary
- Survey background
- Copy of survey instrument
- Profile of Northfield Township
- Profile of respondents
- General overview of the survey
- Content description and summaries of each survey topic
- Statistical analysis of survey results including graphs, raw data and any other information which could be beneficial to the report.
- Related appendices that include detailed cross-tabs of all demographic groups and all questions
- Raw data upon request (excludes respondent ID to preserve confidentiality)

COBALT PARTNERS

Below are some of the organizations with which Cobalt has worked in recent years:

- Aetna
- ALIVE (Charlotte MI)
- Avondale School District, MI
- Birch Run Area Schools, MI
- Bloomfield Hills Schools, MI
- Bridgeport-Spaulding Community Schools, MI
- Buena Vista School District, MI
- Carrollton Public Schools, MI
- Charlotte Aquatic Center, MI
- Charlotte Performing Arts Center, MI
- Charlotte Public Schools, MI
- Charlotte Area Networking for Development and Opportunity (CANDO)
- City of Allentown, PA
- City of Bloomfield Hills, MI
- City of Brookfield, WI
- City of Charlotte, MI
- City of Clare, MI
- City of Copperas Cove, TX
- City of Dearborn, MI
- City of Ferrdale, MI
- City of Garden City, MI
- City of Garden Pointe, MI
- City of Grosse Pointe Farms, MI
- City of Grosse Pointe Park, MI
- City of Grosse Pointe Shores, MI
- City of Grosse Pointe Woods, MI
- City of Janesville, WI
- City of Las Vegas, NV
- City of Lakeland, FL
- City of Oak Creek, WI
- City of Oak Park, MI
- City of Pleasant Ridge, MI
- City of Rocky Mount, NC
- City of Roseville, MN
- City of Royal Oak, MI
- City of Saline, MI
- City of Walla Walla, WA
- City of Warren, MI
- City of Wausau, WI
- City of Wayne, MI
- City of Williamston, MI
- City of Ypsilanti, MI
- Chesaning Union Schools, MI
- Comstock Charter Township, MI
- Cumberland County, PA
- Dewitt Charter Township, MI
- Edward Lowe Foundation, MI
- Employee Benefits Research Institute
- Farmington Public Schools, MI
- Florida Benchmark Consortium, FL
- Frankenmuth School District, MI
- Freeland Community School District, MI
- Gabriel, Roeder, Smith & Company (GRS)
- Gallagher Benefit Services
- General Electric (GE)
- Gerald R. Ford School of Public Policy, University of Michigan
- Government Finance Officers Association
- Grosse Pointe Chamber of Commerce, MI
- Hartland Township, MI
- Hayes Green Beach Memorial Hospital
- Hemlock Public School District, MI
- Ice Miller
- Illinois Municipal Retirement Fund (IMRF) ING
- International Economic Development Council
- International Foundation of Employee Benefit Plans
- Institutional Society of Risk Professionals
- Kalamazoo Charter Township, MI
- Kansas Government Finance Officers Association
- Luna County, NM
- Maple Valley Schools, MI
- Marquette Township, MI
- Merrill Community Schools, MI
- Michigan Association of School Administrators
- Michigan Association of Transit Systems
- Michigan Government Finance Officers Association
- Michigan State Medical Society
- Michigan Municipal League
- Michigan Office of Retirement Services
- Michigan State University Local Government Benchmarking Consortium
- Michigan Township Association
- Midland (MI) Public Schools, MI
- Millman
- Minnesota State Retirement System, MN

- Mississippi Public Employees' Retirement System, MS
- Missouri State Employees' Retirement System, MO
- Missouri DOT and Patrol Employees' Retirement System, MO
- Munder Capital Management
- Municipal Employees' Retirement System (MERS) of Michigan
- National Association of State Retirement Administrators (NASRA)
- National Conference on Public Employee Retirement Systems (NCPERS)
- National Council on Teacher Retirement (NCTR)
- New York State Teachers' Retirement System (NYSTRS)
- Northstar Academy, MI
- Ohio Public Employees' Retirement System
- Ohio School Employees' Retirement System
- Oshtemo Charter Township, MI
- Pittsford Area Schools, MI
- Plante & Moran
- Public Financial Management (PFM)
- Public Pension Financial Forum (P2F2)
- Saginaw Intermediate School District, MI
- Saginaw Township Community Schools, MI
- Salem Township, MI
- School District of the City of Saginaw, MI
- Southeast Michigan Council of Governments (SEMCOG)
- St. Clair County, MI
- Swan Valley School District, MI
- Tegrif Group
- Texas Charter Township, MI
- Tyrone Township, MI
- The International Foundation of Employee Benefits
- University of Michigan Center for Local, State and Urban Policy
- Wichita State University, KS
- Ypsilanti Charter Township, MI
- Yale Public Schools, MI

REFERENCES

Southeast Michigan Council of Governments (Custom survey projects in 2008, 2010, 2011, 2012, 2013 and 2014)

Dave Boerger, SEMCOG Consultant

1001 Woodward Avenue, Suite 1400

Detroit, MI 48226

boerger@semcog.org

(248) 875-7120

City of Royal Oak, Michigan (Project in 2013)

Stewart Meek, Assistant to the City Manager

211 South Williams Street, Royal Oak, MI 48067

stewartm@ci.royal-oak.mi.us

(248) 246-3204

City of Warren, Michigan (Project in 2009, 2011 and 2013)

Lark Samouelian, Communications Director

5460 Arden Road, Warren MI 48092

lsamouelian@cityofwarren.org

(586) 258-2015

Charter Township of Texas (Project in 2013)

Julie VanderWiere, Township Superintendent

7110 West Q Avenue, Kalamazoo, MI 49009

julievw@texastownship.org

(269) 375-1591

TOWNSHIP RESPONSIBILITIES

There are several areas where Northfield Township is responsible for actionable information.

1. Provide Cobalt with scanned copy of the signed and dated agreement
2. Identify a primary point of contact (project lead) on the township staff
3. Provide Cobalt with voter registration or utility billing records in Microsoft Excel or TXT format
4. Provide timely feedback on finalizing scope of services and preferred questions
5. Provide Cobalt with timely revisions of survey instrument and cover letters
6. Provide Cobalt with timely approvals of survey instrument and cover letters
6. Provide Cobalt with a date, time and location of meeting for final presentation of results

SURVEY METHODOLOGY

Cobalt recommends administering the questionnaire to a random sample of 1,500 citizens drawn from voter registration or utility billing records. Conducting a random sample of this size allows the township to gather representative and statistically valid data at a lower cost compared to a census. In addition to the random sample, Cobalt also recommends a multi-modal methodology approach by collecting surveys through two waves of a mailed survey along with a URL to complete the survey online. Each randomly selected resident will have a unique identification number to prevent multiple responses from the same resident and to avoid a reminder message to residents who already completed the survey. Deployment and data collection is generally completed within six weeks. Cobalt's response rate for a mail/online combination survey is generally between

25 and 35 percent. The combination of mail and online has proven very effective and provides a higher response rate. Township communication in newsletters and media can increase this response rate.

After the township approves the survey, Cobalt mails an initial copy of the survey with a postage paid envelope. After approximately 10 days, non-respondents receive a second reminder letter with a copy of the survey and postage paid envelope.

Data is coded by industry professionals utilizing current technology and robust quality control to ensure accuracy. Data scrubbing of final results ensures duplicate responses, multiple responses from the same individual and responses from invalid survey ID numbers are removed.

Cobalt proposes a five-step process for the development of the assessment:

Step 1 – Kick-off Discussions

Clarify the issues and make sure all relevant voices are heard in developing the objectives of the study. Refine the scope, timeline and key deliverables for the project. Confirm informational needs. The collection methodology will also be finalized during this step.

Step 2 – Questionnaire Development

Based on the input received during Step 1, Cobalt and the township will develop questions for the questionnaire which will be presented and discussed with the project lead to ensure that the questions included in the assessment are aligned with organizational needs.

Step 3 – Assessment Deployment

Cobalt publishes the assessment in the manner determined by the township (mailings, Eblast, Internet only, phone). The Cobalt team's public relations consultant will publicize the launch of the survey. Cobalt collects and codes the responses.

Step 4 – Modeling & Analysis

Cobalt will analyze the data and develop modeling using Cobalt's proprietary methodology, which quantifies the relationships between the various elements of the assessment.

Step 5 – Reporting

Findings will be communicated to the project lead and other key decision makers in a meeting, with the Township to determine whether that will be at the planning commission or board of directors. A summary report in PowerPoint, detailed cross tabs, and other supporting documents will be provided to the project lead.

FEE SCHEDULE

Count	Core Package	Subtotal
1	Includes administration, meetings, correspondence, planning, publicity placement executive summary in MS PowerPoint, 2 sheets (4 pages of custom questions (which can include budget priority analysis, future projects, communication preference, etc.)) demographic questions, detailed cross-tabs with thermal mapping, raw data, phone-based follow-up with sponsor on draft results, onsite presentation of final results	\$ 6,497
Additional Modules and Options (See reference for Examples)		
	Additional Pages: \$1,000 per page	\$ -
	Non-English Versions: \$650 per translation	\$ -
	Follow-up Citizen Work Groups/Focus Groups (Sponsor provides location and recruits participants): \$1,200	\$ -
Distribution		
1	Web link for completion online (Included) \$Waived	\$ -
	Eblast distribution via email list provided by Sponsor (3 waves): \$100 per 1,000 recipients	\$ -
1	Mail distribution: Production and postage for an initial first class mailing to 1,500 residents of the assessment with cover letter, data entry, a second mailing to those who have not responded, and business reply postage. \$3,550	\$ 3,550
	Mail distribution: Production and postage for an initial non-profit rate mailing to 1,500 residents of the assessment with cover letter, data entry, a second mailing to those who have not responded, and business reply postage. \$2,800	\$ -
Total Quote: \$10047		

CONCLUSION

While our services to Northfield Township will focus on a specific issue, Cobalt's work with communities across the country gives us a unique understanding about the many, broad issues affecting local governments. As a Michigan based non-profit, we care about the success of Michigan communities. Our partners consistently give us very high marks in satisfaction.

"The information we received from working with Cobalt was excellent in better understanding our organization. I would highly recommend other municipalities to utilize Cobalt and the survey methods when making planning and budgeting decisions."

Karen Lovejoy Roe, Township Manager
 Charter Township of Ypsilanti, MI

We welcome the opportunity to help Northfield Township find the right framework for future development decisions.

**NORTHFIELD TOWNSHIP
PLANNING COMMISSION
Minutes of Regular Meeting
April 1, 2015**

1. CALL TO ORDER

The meeting was called to order by Chair Marlene Chockley at 7:05 p.m. at 8350 Main Street.

2. PLEDGE OF ALLEGIANCE

7. REPORTS

7A. Board of Trustees
Chick reported that the March 24th workshop meeting the Board heard presentations on sewer capacity and from the Washenaw County Road Commission.

7B. ZBA
The ZBA met this past Monday and granted two variance requests.

7C. Staff Report
Fink said the new Assessing and Building Assistant, Mary Bird, will be attending some Commission meetings in the future.

7D. Planning Consultant
No report.

8. PUBLIC HEARINGS

8A. Case JPC#150003: Rohani Foulkes, Owner.
Location: 9623 Earhart Road; Request for Conditional Use Permit to allow use of existing outbuilding for Agricultural Commercial/Tourism under Section 36-730. Parcel 02-01-200-022; Zoned AR—Agricultural.

► **Motion:** Dignan moved, Chick supported, that the public hearing in Case JPC#150003 be opened.
Motion carried 6—0 on a voice vote.

Ken Cousino, Engineering Technologies, introduced the applicant, Rohani Foulkes, and her husband, Matthew Lenhoff. He said their current proposal is much scaled down from the original one. He noted the property is 8.2 acres and has a dirt floor arena and a potting barn.

Foulkes noted that after speaking with their immediate neighbors they submitted an amended plan which would reduce peak traffic to the site from about 80 to about 15 cars and reduce the events from one large and one small event each weekend to small events. She said they are beginning farmers, and they are committed to transparency and communication with neighbors. She said the preservation of farm land in the area is threatened and there is a need to introduce other agricultural uses to sustain that character of the area.

Planning consultant Laura Kreps agreed that the new proposal is significantly reduced from the original, but said two variances for an Agricultural Commercial Business from the Zoning Board of Appeals (ZBA) would be required: one for the minimum lot size of 10 acres, and another for the minimum setbacks of 200 feet from adjacent properties.

Dignan said he would not be participating in the questioning of the applicants or in the discussion of

**3. ROLL CALL
AND DETERMINATION OF QUORUM**

Roll call:
Janet Chick Present
Marlene Chockley Present
Brad Cousino Present
Kenneth Dignan Present
Sam Jaquinto Absent with notice
Larry Roman Present
Mark Stanalajczko Present

Also present:
Township Manager Howard Fink
Planning Consultant Laura Kreps,
Carlisle/Wortman Associates
Township Engineer Jacob Rushlow
Recording Secretary Lisa Lemble
Members of the Community

4. APPROVAL OF AGENDA

Chockley asked that item 10A be moved to follow item 8A, and to remove Case JPC#150003 due to lack of a complete site plan.

► **Motion:** Dignan moved, Roman supported, that the agenda be adopted as amended.
Motion carried 6—0 on a voice vote.

5. FIRST CALL TO THE PUBLIC

Nowatzke Site Plan. Dale Brewer, 11548 East Shore Drive, objected to this application being on the agenda due to lack of complete site plan and unpaid taxes, said a buffer strip should be required on this property, questioned the uses proposed for the property, expressed concern about traffic, and pointed out zoning ordinance violations.

Master Plan. David Gordon, 5558 Hellner Road, said the Baltimore proposal raised issues of the sewer plant capacity being exceeded or a private sewer plant being used, asked what such a development would cost the taxpayers for additional public services, and addressed the issue of loss of open space.

6. CORRESPONDENCE

Chockley listed the names of people who had written to the Commission about the request by Rohani Foulkes.

the request because he is chair of the ZBA and this request may come before that board.

George Jackson, 9380 Earhart, said after meeting Rohani and Lenhoff he realized they have the good of the neighborhood at heart and seem to be very sensible.

Elvera Trapp, 9707 Earhart, said she and her husband have lived in their home for 46 years, plan to remain there, and think the proposal would diminish the quality of their lives. She cited concerns about traffic, security, alcohol consumption, noise, water consumption, lowered property values, and disturbance of their quiet enjoyment of their home.

David Barry, 9581 Earhart, said this section of the ordinance says proposed uses are supposed to be "complimentary and accessory to the primary agricultural land use," but that would not be the case here because the land is not farmed. He said the barn they are proposing to use is less than 30 feet from his property, which is in violation of building setbacks much less the 200 foot setback required for these uses. He objected to the noise and light pollution that would result.

Laurel Ratering, 9813 Earhart Road, said she is concerned about busloads of children or large groups of adults being unsupervised and straying onto neighboring properties. She said the property is so narrow that only a 54' x 80' ft. piece of the subject property could be used for the proposed purposes.

Theresa Barry, 9581 Earhart, read a letter from the owners of 9555 Earhart Road, Andre and Mary Plave, who objected to the proposal saying it would not contribute the community and would disturb the quiet, peaceful, rural setting.

David Perry, 9411 Earhart Road, said he lives on 10 acres on which he has planted 100 timber trees and a large vegetable garden. He said he would be happy to teach the applicants what he knows about these things, but their proposal would bring only negative effects to their quiet agricultural neighborhood. He listed many neighboring farms consisting of dozens or hundreds of acres. He noted that the five acre Cottonwood Farm in Webster Township—which had been ordered closed by the courts—created many negative effects on that neighborhood.

Allison Hollister, 9372 Earhart, said she has lived in her house for almost 20 years and is opposed to the proposal because the dirt road cannot handle the extra traffic, the proposed uses do not fit the zoning ordinance, and the parcel is smaller than the required 10 acres and cannot meet the 200 foot setback requirements. She said the entire neighborhood is opposed.

Andy Duvall, 9760 Earhart, said he has lived on his property for 30 years engaged in agriculture. He said he is concerned about this proposal setting a precedence, he asked if the serving of alcohol would be

allowed, and said he is also concerned about target shooting.

Lee Britchine, 568 Fergus in White Lake, said he represents the house in his father's estate at 64603 West Eight Mile, and said he has concerns about the proposal and made reference to Long Farm in Congress Township.

David Johnson, 9381 Earhart Road, said this is a smokescreen for renting a hall to have parties and making money, rather than about the welfare of the neighborhood.

David Gordon, 5558 Hellner, said while the proposal seems very nice, it is opposed by all of the residents, does not conform to the ordinance, and does not comply with the Master Plan. He said as in the case of the Blimmo proposal, it is important to follow the Master Plan.

Kathy Nieman, 9355 Earhart, expressed concerns about traffic, outsiders coming into the neighborhood on their small road, and increased commercial activity.

David Trinoski, 9562 Earhart, opposed the proposal citing decreased property values, traffic, safety of children, and participants drinking whether there is a liquor license or not.

Judy Johnson, 9381 Earhart, read definitions of "event" describing them as large parties of various types.

Robert Stautz, 64355 West Eight Mile Road, said Earhart Road cannot handle additional traffic which would not be compatible with the horses, dogs, and children using the road.

Chockley noted the public has not had the opportunity to view the revised plans.

► **Motion:** Roman moved, Stanalajco supported, that the public hearing in Case JPC#150003 be closed. **Motion carried 6—0 on a voice vote.**

In answer to questions from Chockley, Foulkes said she expects her revised proposal to be ready for the April 15, 2015 meeting.

10. NEW BUSINESS

[Heard out of order].

10A. Case JPC#150003; Rohani Foulkes, Owner.
Location: 9623 Earhart Road; Request for Conditional Use Permit to allow use of existing outbuilding for Agricultural Commercial/Tourism under Section 36-730. Parcel 02-01-200-022; Zoned AR—Agricultural.

► **Motion:** Chick moved, Roman supported, that the request in Case JPC#150003 be postponed to the April 15, 2015, Planning Commission meeting.

Motion carried 5—0—1 on a roll call vote,
Dignan abstaining.

9. OLD BUSINESS

- 9A. Case #JPC140003; Nowatzke Truck & Trailer; Location: 6900 Whitmore Lake Road; Request for Site Plan Approval for a convenience store and gasoline/diesel fueling station. Parcel 02-20-300-036; zoned GC—General Commercial.

Removed from the agenda.

9B/9C. Master Plan Update/Citizen Survey.

Chockley noted there is nothing new on this, but the citizen survey request for proposals have been sent out with a submittal deadline of April 3rd

10. NEW BUSINESS (continued)

10B. Sewer Capacity Report.

Brian Rubel, Tetra Tech, said this was not a master plan, rather it was an inventory of the Township's current commitments for sewer capacity. He reviewed his written presentation, and said:

- They are also updating the sewer map which has not been done in 20 years.

- This is a very concise evaluation of commitments the Township has made regarding sewers, not a master plan.

- Northfield Township has two agreements with Green Oak Township: A 2001 agreement for 124 Residential Equivalent Units (REUs) on the north side of Whitmore Lake (about 20 of which have been added since then), and a 2004 agreement to provide 200,000 gallons/day or 769 REUs for an area to the west. The total of these is 873 additional REUs or just over 225,000 gallons/days. In answer to a question from Stanalajczo, Rubel said the latter agreement includes a map showing where this service could be provided.

- (In answer to a question from Dignan), per Township attorney Burns a 2002 agreement rescinded a prior commitment to Hamburg Township.

- The Township has commitments to four special assessment districts (SADS): Lake Point(4 units all built out), North Territorial (the biggest of these—about 1620 additional REUs, of which 20 are connected), Seven Mile Road (an estimated 169 REUs of 44,000 gallons/day), and Whitmore Lake Road (the district has been established at 76 REUs or 20,000 gallons/day). The total remaining commitment in excess of those that have already hooked up is 1,865 REUs and an additional 485,000 gallons/day.

- The total remaining commitment for capacity to Green Oak Township and the four SADS in

Northfield Township is 2,738 REUs and just over 700,000 gallons/day.

- About 60-70% of communities have storage capacity for times of very wet weather which allows the excess at those times to be treated later over a longer period of time.

- The current capacity of—and the State permit for—the WWTP plant is 1.3 million gallons/day (MGD), and if storage during wet times were available the capacity could be increased to 1.5 MGD. The State requires that when treatment reaches 85% of capacity—which would be 1.1 MGD for the WWTP today—additional capacity must be built or storage must be provided.

- The current 365 day average being treated is .7 MGD, but in the spring it is closer to .9 MGD, so an additional .2 MGD or 800 REUs could be handled without additional storage or .4 MGD or 1500 REUs with building additional storage.

In answer to a question from Stanalajczo, Rubel said there are commitments, but no specific proposals to use the allotted taps have been made for any of these areas.

Chockley said her concern is what the Township's liability would be if the remaining sewer capacity was allowed to be used by other developments and then a property owner in one of these areas requested service. She also asked how many other properties there are on sewer lines—but not in the areas listed—that could request service. In answer to a question from Stanalajczo, Rubel said sewer taps have not been allotted in advance to vacant parcels.

Rubel said the policy in most communities is that as demand occurs the sewer plant is expanded. In answer to a question from Cousino, Rubel said the required sewer capacity for a sewer district is based on the probable uses and the acreage.

In answer to a question from Dignan, Rubel said the averages quoted are over the last few years. In answer to a question from Stanalajczo, Rubel said a sewer system is supposed to be closed, but as systems age cracks develop that allow ground water to come in. In a study his firm did for the Township about 15 years ago infiltration was found to be fairly uniform throughout the Township.

Stanalajczo asked whether enforcement of the ordinance prohibiting the directing of stormwater (usually through sump pumps) into the sanitary sewer system should be done. Rubel said 15 years ago the study got to the survey level, but there was hesitance to spend the time and effort on enforcement. Fink said this is a common problem, usually in older subdivisions where directing stormwater in sanitary systems was common.

In answer to a question from Chockley, Rubel said metering wastewater is extremely costly, so is rarely done.

Rubel concluded his review of the report:

- A 2002 Department of Environmental Quality (DEQ) policy requires sewer systems to handle a 3.9" storm in one day, which means Northfield Township's WWTP would have to build 1.7 million gallons of storage for its current operations (and that size would be sufficient for many additional years).
- Storage could be above or below ground, could be made of steel or concrete, and would require upgrades to pumps, but that would be a manageable cost. The cost for a tank of the required size would be \$2.5-\$3 million dollars for a steel tank or an additional \$500,000 for a concrete tank.
- It has been challenging for the WWTP plant to handle peak spring flows, so the storage tanks would be useful immediately and would extend the existing plant capacity for a number of years.
- With only 800-1500 REUs available before capacity must be increased, but having commitments for an additional 2,738 REUs, the Board needs to consider what its policy will be regarding proposals for additional growth in the Township.
- Next steps include investigating financing for the tank and considering increasing connection fees to cover this cost. The most popular source is a revolving fund loan program with the State of Michigan, but there are restrictions on access to those funds.

In answer to a question from Dignan, Rubel said REUs in a sewer district are figured on the future land use designation—not the current zoning—and the acreage. In answer to another question from Dignan, Fink said if the number of REUs originally estimated for a sewer district is unexpectedly exceeded by a large development, the tap fees charged (\$3,500 per REU) would be used for capacity expansion.

Stanalajczko asked whether a large development demanding 1000 REUs could be denied because the Township already has 2700 REUs committed to other areas. Fink said he really does not know, but in his opinion it comes down to a policy decision by the Board of Trustees about how they want to manage the capacity of the plant over the next 30-50 years.

Cousino asked whether in the scenario of a property owner in an SAD who was assessed based on future use of 30 REUs, that owner can be denied sewer service based on lack of capacity because other property owners used up the capacity first. Fink said this is an issue of how well the Township manages its capacity over time. While it is true that that property owner was assessed for 30 REUs, these are difficult questions and there are legal issues involved.

Dignan asked if he can pay for a tap and not use it immediately. Fink said he doesn't know, but he would generally say no because he does not see an REU as a commodity.

Fink said capacity probably has to be reserved for the Green Oak REUs because that is a contractual obligation, but for other potential demand the common practice is to build more capacity once a certain percentage (75%-85%) of the current capacity of the plant is expanded.

In answer to a question from Chockley, Rubel said in essentially every community he works with the commitments for sewer service exceeds the existing capacity. Dignan said the current sewer usage would have to be doubled before the plant capacity would be reached.

Dignan noted that Wastewater Treatment Plant Superintendent Hardesty has noted that a couple of times each year he has to make decisions about what treatment steps to forego when the plant capacity is exceeded, and when the frequency of those occurrences increases substantially the Board will have to make decisions about providing additional capacity or storage.

In answer to a question from Cousino, Fink said people in the Township not using the sewer system do not pay for it because WWTP operations are required by law to cover expenses. Fink noted the Township recently increased the quarterly charge per REU to \$84 for the first time in 4-5 years. He said this is still lower than most sewer districts in the area, and part of the increase has been designated for building reserves for expansion.

Chockley questioned whether any of the reserve sewer funds could be used to address infiltration. Fink said an infiltration study could cost about \$300,000, but short of that letters could be sent to property owners asking them to disconnect sump pumps, etc., although it would not be very effective.

[Roman left at this point].

12. MINUTES

March 18, 2015, Regular Meeting

Chockley made three minor corrections.

- ▶ **Motion:** Dignan moved, Stanalajczko supported, that the minutes of the March 18, 2015, regular meeting be approved as corrected, and to dispense with the reading. **Motion carried 5—0 on a voice vote.**

[Roman returned at this point].

12. POLICY REVIEW & DISCUSSION

12A. Leapfrogging of Sewer Service. Kreps referred to her memo of November 5th and said the Township's Master Plan requires that expansion of sewer service must be contiguous to current sewer service, and if there is any question about an application to extend sewer lines, the Township Board would have to decide whether the request constituted leapfrogging.

**Northfield Township Planning Commission
Minutes of Regular Meeting
Public Safety Building; 8350 Main Street
April 1, 2015**

12B. Calendar. Chockley referred to the calendar of expected items to be on Commission agendas and reviewed upcoming items. In answer to a question from Chick about the questions that will be in the community survey, Kreps said she would expect that the Township will want to inform the firm doing the survey which topics are to be included, but the wording of the questions should be left to the professionals.

There was discussion about whether the Planning Commission should review bids for the survey consultant and make a recommendation to the Board. It was agreed to put this on the April 15th Planning Commission agenda.

Dignan questioned whether the scope of work on the Master Plan should be expanded. Chockley referred to a memo distributed with the last Commission packet outlining the options of a narrower vs. a more expanded study area. Chick said she would not be opposed to that because she does not want it to look like the Master Plan revision is being considered because of a specific request by a specific developer. She said Biltmore may have been the trigger, but it would have been important to look at this issue anyway.

Kreps said the point of a community survey is to gauge the feelings of the residents without focusing on a particular area. Fink said the methodology will be scientific, but it has yet to be determined whether random sampling will be used.

Chockley said she would not be opposed to throwing out the Master Plan Amendment request and working on the Master Plan revision. She said she is not afraid of hearing what the public has to say. She said Biltmore did not provide the studies requested, which is why the Planning Commission did not proceed with their request, but now the sewer study is available, a community survey is being planned, and traffic information is being gathered.

Dignan said traffic studies are not needed for developing a Master Plan which looks 20 years into the future.

Prepared by Lisa Lemble.

Corrections to the originally issued minutes are indicated as follows:

~~Wording removed is strikethrough; wording added is underlined.~~

Adopted on _____, 2015.

12C. Development of Planning Commission Agenda. Stanalajczko said he thinks Commission agendas should be developed and published by the Township staff based on input from the Commission and planning consultant, rather than by the Commission chair. He said this is part of the move to Township Manager form of government in order to provide continuity of services. He said that is the way the Township Board agendas are done. It was agreed the Commission should work toward having staff handle more of these functions as appropriate and as new staff are trained.

13. SECOND CALL TO THE PUBLIC

Sewer Study. David Gordon said it would not be appropriate to given away REUs that have been paid for by members of sewer districts to owners of new developments. He referred to the millage required to be paid by Sylvan Township residents because of a failed housing plan that a developer walked away from.

14. COMMENTS FROM THE COMMISSIONERS

Roman noted that an article about Cottonwood Farm in Webster Township (referred to during discussion of the Rohant Foulkes Proposal) was published on MLive on January 15th.

Fink reported that the US-23 project passed the Washenaw Area Transportation Study (WATS) technical committee on a close vote so will move on in the approval process.

15. ANNOUNCEMENT OF NEXT MEETING

April 15, 2015, at 7:00 P.M. at the Public Safety Building was announced as the next regular Commission meeting time and location.

16. ADJOURNMENT

► **Motion:** Chick moved, Dignan supported, that the meeting be adjourned.

Motion carried 6—0 on a voice vote.

The meeting was adjourned at 10:07 P.M.

Marlene Chockley, Chair

Mark Stanalajczko, Secretary