



**CITY HALL**

207 Lafayette Street  
P.O. Box 378  
Winona, MN 55987-0378  
FAX: 507/457-8212

April 6, 2016

Planning Commissioners  
Winona, Minnesota 55987

Dear Commissioner:

The next meeting of the Planning Commission will be held on **Monday, April 11, 2016,** at 4:30 p.m. in the **Wenonah Room** of the Winona City Hall.

1. Call to Order
2. Minutes – March 25, 2016
3. Site Plan Review – 919 Shives Road
4. Other Business
5. Future Action Items
6. Adjournment

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Moeller".

Mark Moeller  
City Planner

## **PLANNING COMMISSION MINUTES**

**DATE:** March 28, 2016

**TIME:** 4:30 p.m.

**PRESENT:** Commissioners Shortridge, M. Olson, Boettcher, L. Olson, Buelow, Porter and Hahn

**ABSENT:** Commissioners Davis and Ballard

**STAFF PRESENT:** City Planner Mark Moeller; City Planner Carlos Espinosa, and City Manager Steve Sarvi

---

The meeting was called to order at 4:30 p.m. by Vice-Chair Hahn.

### **Approval of Minutes – February 8, 2016**

The minutes from the Commission's meeting of February 8, 2016 were reviewed, and upon motion by Commissioner L. Olson, and second by Commissioner M. Olson were unanimously approved as submitted.

### **Discussion – Development Code Diagnosis Report and Draft Unified Development Code Annotated Outline – Representatives of Hoisington Koeqler Group to Facilitate Meeting**

Vice Chair Hahn introduced this item by noting that the focus of today's meeting was a presentation by representatives of the Hoisington Koeqler Group, relative to the Development Code Update Project. He noted that this focus would revolve around the consultants Development Code Diagnosis Report and Draft Unified Development Code Annotated Outline, included as part of today's Commission agenda package, and as Exhibit A to permanent minutes.

At this point, he introduced representatives of the Hoisington Koeqler Group to provide further comment.

Jeff Miller stated that since their last meeting with the Commission (and City Council) at the end of January, he and co-planner Rita Trapp had conducted a fairly exhaustive diagnosis of City current development codes. These include Zoning, Subdivision, Shoreland Management, Site Plan, Planning Commission, and general City administration chapters. The purpose of the code diagnosis was to provide a detailed documentation of the strengths and weaknesses of the City's current codes in terms of usability, organization, effectiveness of standards, and inconsistencies within codes. He explained that a summary of report findings had been included in the Development Code Diagnosis and Annotated Outline Report.

## PLANNING COMMISSION MEETING MINUTES

MARCH 28, 2016

PAGE 2

---

Along with the code diagnosis section, Mr. Miller explained that the document includes a recommended outline for the City's New Unified Development Code.

Mr. Miller further stated that as part of today's meeting, he and Ms. Trapp will begin the process of updating the development code by presenting a draft chart which is designed to restructure and categorize uses that are presently allowed across all of City's zoning districts.

At this point, Mr. Miller provided a general summary of diagnosis findings, including:

- Code Reorganization – At present, development code provisions are generally found throughout 6 chapters of City Code, while the zoning ordinance currently includes 19 individual articles. As proposed, the Draft Unified Development Code Annotated Outline incorporates all development code provisions into a single chapter including 7 articles. Additionally, the current cumulative approach used in administering the present zoning ordinance is complex and could be greatly simplified.
- Administrative Procedures – Although variance procedures are fairly well defined, conditional use provisions are integrated into a couple of code sections. Additionally, provisions related to the Architectural Review Board are awkward and administrative provisions of this board should be greatly clarified. Provisions of this board should be greatly clarified. Provisions for zoning certificates and certificates of occupancy should be clarified.
- Individual zoning districts lack a statement of purpose and general language is outdated. The Zoning Code includes a complex system of defining district standards. These make it difficult for the average citizen to understand. Cluster Development provisions include inconsistencies.
- Downtown Districts – At present, there are a number of various zoning/overlay districts that apply to the Central Business District Core. A great deal of the core area does include manufacturing zoning which no longer fits the area. Current development provisions do not fully reflect Comprehensive Plan recommendations.

At this point, Mr. Miller asked the Commission if they had questions of his presentation.

Commissioner Shortridge asked Mr. Miller if he had received a copy of a letter that had been forwarded from the Heritage Preservation Commission relative to its desire to, in part, provide input into downtown planning. Mr. Miller replied that neither he nor Ms. Trapp had received such a letter. At this point, a copy of the letter was provided to Mr. Miller. Mr. Miller noted that when work begins on restructuring CBD zoning, HPC feedback would be encouraged.

At this point, Ms. Trapp reviewed recommendations for the Unified Development Code Annotated Outline. As currently proposed, this new chapter would include a total of 7

articles plus an appendix. At this point, she summarized the proposed structure of this code as reflected in the Commission's agenda package.

In response to a question by Commissioner M. Olson, Ms. Trapp noted that although new code provisions may result in the creation of nonconformities, specific language related to that issue had not yet been drafted. As a result, she was unsure as to the extent of this issue.

At this point, Mr. Miller provided a handout to the Commission relating to Consultant recommendations as to how various zoning use categories and types would be structured in the development code. Included in this information was a proposed chart showing current zoning ordinance uses and where they are generally permitted or conditionally permitted within the Code. Mr. Miller noted that given that the identification of uses within current zoning is cumulative across districts, the presentation of a simple chart which lists uses, and where they are permitted, would be a tool of the Unified Development Code. Also, included on this chart were consultant recommendations for where uses would be restructured. In part, this restructuring would reduce the number of permitted allowable uses from 125 to 100, thereby simplifying the code. At this point, Mr. Miller reviewed with the Commission, the use chart that included 7 general land use categories relating to:

- Residential Use
- Public & Institutional Use
- Commercial Use
- Manufacturing Use
- Recreation and Open Space Use
- Natural Resource and Agricultural Use
- Utilities and Transportation Use

He then reviewed proposed uses within each of these major categories. He concluded by emphasizing that this information was being presented on a preliminary basis only. Once refined, it will, in part, be used in the restructuring of various zoning districts. He and Ms. Trapp will be coming back to the Commission at a future point to formally adopt final use chart.

Upon general Commission discussion, Mr. Miller asked if there was a desire to retain "shotgun lots" that exist throughout the City. It was noted that such lots were generally created prior to 1960 (the enation of the City's current zoning ordinance), and generally do not meet requirements of underlying zoning. Such lots are presently treated as "lots of record" under zoning provisions that allow for levels of flexibility without the need for variances. Once such lots are restructured (i.e.: combined with another lot of record), they are no longer treated as lots of record. At that point, redevelopment would be subject to performance standards of underlying zoning.

## PLANNING COMMISSION MEETING MINUTES

MARCH 28, 2016

PAGE 4

---

Commissioner L. Olson stated that he would not like to see any provision that would restrict a property owner from buying two nonconforming lots and combining them into one.

Commissioner Shortridge suggested that the redevelopment of lots of record should have some controls.

Commissioner Porter stated that he has driven through areas of the City that have high concentrations of "shotgun lots", and suggested that it may be difficult to define a theme within such neighborhoods.

Commissioner M. Olson suggested that the incorporation of photos would be valuable in helping the average citizen to understand design standards.

Ms. Trapp emphasized that the scope of this project relates to developing form based concepts/standards for the Central Business District area and a couple of mixed use commercial districts. Given budget constraints, it will not be possible to extend that concept to other areas. However, it is something the City could initiate as a separate project.

Discussion then ensued relative to additions for attached dwellings vs. shared wall buildings and "floors". Mr. Miller emphasized that all of these would be included in the draft Unified Development Code.

Commissioner Shortridge asked if the proposed code would address small lot and building concepts. Mark Moeller, City Planner, noted that this is a concept that can now be accomplished through the Cluster Development process.

Commissioner Boettcher stated that use concepts for some theaters currently include bars. He asked if these types of concepts would be included under the revised development code. Mr. Miller responded that it would be clarified under the definition section.

In addressing parks and park land, Mr. Miller again stated that such classifications as active park, playground, playfield, or passive park would be defined under the new code.

It was further suggested that vineyards and micro distilleries be added as permitted uses within certain zoning districts. Mr. Miller responded that he and Ms. Trapp would take a look at this.

At this point, Mr. Miller noted that he and Ms. Trapp would return to the Commission during its meeting of Monday, April 25<sup>th</sup> to continue discussion of the updated code. He encouraged all to be prepared for a meeting which is a bit longer than normal.

## PLANNING COMMISSION MEETING MINUTES

MARCH 28, 2016

PAGE 5

---

### Other Business

Mr. Moeller introduced Steve Sarvi as the City's new City Manager.

At this point, the Commission introduced themselves to Mr. Sarvi.

It was noted that Winona State University would be hosting an Open House relative to its planned comprehensive plan update. This meeting will be held at 5:30 on Wednesday, March 30<sup>th</sup>. Mr. Espinosa stated that he planned to attend.

Commissioner M. Olson stated that the Commission had received a copy of the VEH site plan for redevelopment of a site on Frontenac Drive. Given her review of the plan, she did have concerns related to the projects impervious surface cover and the fact that no sidewalks exist along Frontenac adjacent to the development. Given this, she was inclined to request that the project be reviewed by the full Commission.

Following brief discussion, it was suggested that if Commissioner M. Olson wanted full Commission review of the site plan, it could be requested under site plan ordinance provisions. Commissioner M. Olson stated that she would do so.

### Adjournment

There being no further business to come before the Commission, the meeting was adjourned.

---

Mark Moeller  
City Planner

# PLANNING COMMISSION

**AGENDA ITEM: 3. Site Plan Review – 919 Shives Road**

**PREPARED BY: Carlos Espinosa**

**DATE: April 11, 2016**

On March 22<sup>nd</sup>, the Community Development Department received a request from VEH Frontenac LLC for construction of a retail center at 919 Shives Road. The proposed retail center is part of a larger development which potentially includes a hotel and a restaurant use/building (Attachment A). However, due to timelines for closing on the other properties involved with the larger development, a site plan was submitted only for the retail center.

As proposed, the retail center meets City zoning and setback requirements. The applicant proposes to provide 85 parking spaces for the retail center. City Code requires 76 parking spaces based on the mix of proposed uses. The developer is proposing the 9 extra spaces due to requirements of the tenants. There are no provisions in City Code which prevent a developer from providing additional parking spaces due to tenant requirements. Stormwater from the proposed development will be directed to a stormwater pond in the northwest corner of the overall development. On-site stormwater management is required per City Code, and the proposed stormwater plans meet city regulations. On Monday, March 28<sup>th</sup>, department staff met to review the plan. A list of required modifications from this review is provided in Attachment B. The required modifications relate primarily to water and sewer utility plans.

Given the March 22<sup>nd</sup> submittal of the site plan, notice was provided to neighboring properties and Commissioners offering an opportunity to examine the plan and to request Planning Commission review. Following the notice, Commissioner M. Olson submitted a request for Planning Commission review of the plan on March 29<sup>th</sup> (Attachment C). Per City Code, a request is required to provide specific reasons for review, and such reasons shall be based on consistency with the Comprehensive Plan, City Code, and/or the standards and criteria for site plan review. The request asks to review the site plan's consistency with the following direction from the Comprehensive Plan:

- Part 12 Transportation Plan
  - Goal #4: Non-motorized transportation: Establish a safe and efficient non-motorized transportation system that accesses all parts of Winona and the regional trails network.
    - Objective 1: Expand the City's network of sidewalks and crosswalks in order to provide comfortable and safe pedestrian access throughout Winona.

Although not proposed in the site plan, communication with the City Engineer and the City Attorney has confirmed the City's ability to require a sidewalk along Frontenac Drive immediately in front of the development per City Code Section 42.05(d). Should the Commission approve the site plan with the requirement to install a sidewalk, the City will consider options for connecting this portion of sidewalk to the existing sidewalk along Mankato Avenue and Menard Road (Attachment D).

Subsequent to the request for Commission review, the developer has submitted a set of revised plans (Exhibit E) that, in part, address staff concerns listed under Exhibit B. Again, although most comments pertained to utility concerns, clarifications relating directly to the site plan include:

- All trash enclosures will be constructed to a minimum height of 6 feet (Sheet 4 Notes-Revised Plans 4/4/2016).
- On-site lighting will not exceed a height of 30 feet, and will employ full cut-off style lights (Sheet 4 Notes-Revised Plans 4/4/2016).

Given review of revised plans, staff has determined that the project is consistent with applicable provisions of City Code.

In addition to the previous, and in accordance with the request for Commission review (Exhibit C), the developer has agreed to construct a 5' wide sidewalk along the full frontage of the property. This sidewalk is reflected on Sheet 4 (site plan) of revised plans.

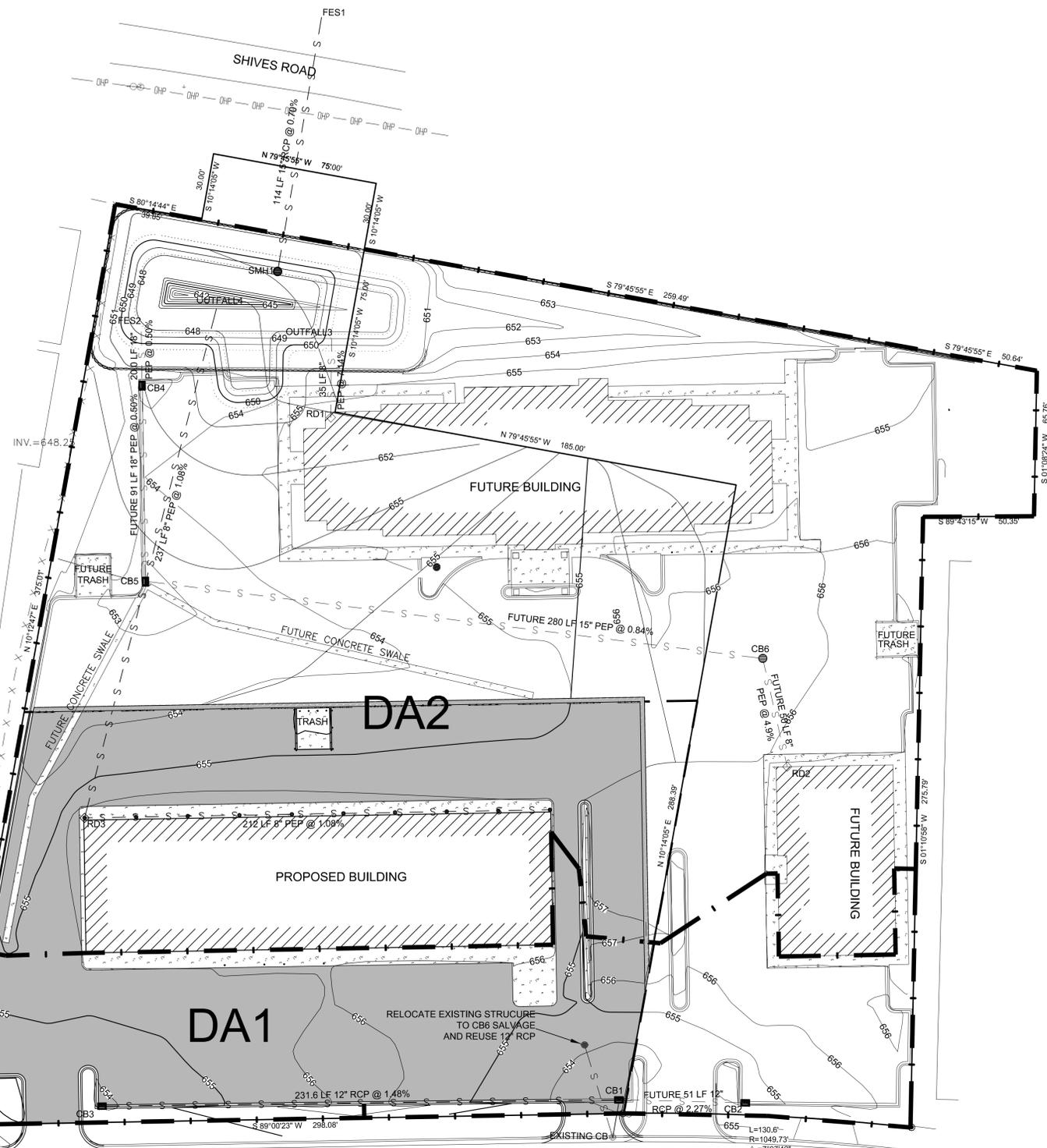
During examination of the plan, Commissioners are reminded that the scope of the review is limited to the consistency of the proposed site plan with existing City Code and site plan standards (Attachment F).

Subsequent to its consideration of the plan, the following actions are available to the Commission:

1. Approve the site plan.
2. Approve the site plan – with conditions. Such conditions should be directly related to fulfillment of City Code provisions and serve to protect the public health, safety, and welfare.
3. Deny the site plan – stating reasons related to City Code provisions.
4. Table action pending additional information.

#### Attachments

- A) Selected Site Plan Sheets
- B) City Staff Review Letter
- C) M. Olson Review Request
- D) Map and City Code Section 42.05
- E) Revised Site Plan 4/4/2016
- F) Site Plan Standards



# LEGEND

These standard symbols will be found in the drawing.

- PROPOSED CONCRETE
- PROPOSED BITUMINOUS
- PROPOSED LANDSCAPE AREA
- PROPOSED DRAINAGE AREA BOUNDARY
- PROPOSED PHASE BOUNDARY

## STORM SEWER NOTES

- F.E.S. 1  
15" RCP INV.=647.50
- SMH 1  
STORM CONTROL STRUCTURE  
GRATE=651.10  
3" HOLE=650.80  
3" & 1" HOLE EL=648.30  
15" RCP INV.=648.30
- CB 5  
RIM=652.75  
INV.=648.70
- CB 6  
RIM=655.00  
INV.=651.05
- FES3  
INV.=649.25
- RD 1  
EL=651.75  
VERIFY LOCATION WITH MECHANICAL PLANS
- RD 2  
EL=653.50  
VERIFY LOCATION WITH MECHANICAL PLANS
- RD 3  
EL=653.70  
F&I 10 ROOF DOWNSPOUT CONNECTIONS TO ADS DRAINAGE TILE-SEE DETAIL. VERIFY LOCATION WITH MECHANICAL PLANS
- FES4  
INV.=647.42  
WILL BE RELOCATED TO FES2 DURING FUTURE EXPANSION
- CB 1  
RIM=653.00  
INV.=648.64
- CB 2  
RIM=653.80  
INV.=649.80
- CB 3  
656.08  
INV.=652.08
- FES2  
INV.=648.13
- CB4  
RIM=652.75  
INV.=648.23

## POND HYDROLOGIC DATA

**EXISTING CONDITION:**  
 DA = 3.61 ACRES Q2 = 2.79CFS  
 L = 500 FT Q10 = 6.73 CFS  
 S = 1.00% Q100 = 12.37 CFS  
 TC = 21.8  
 CN = 74

**PROPOSED INTERIM CONDITIONS:**  
 DA 1 (TO EXISTING CATCH BASIN) = 0.80ACRES ( 0.50 ACRES IMPERVIOUS AND 0.30 ACRES PERVIOUS)  
 L = 300 FT Q2 = 1.89 CFS  
 S = 0.45% Q10 = 3.27 CFS  
 TC = 13.2MIN Q100 = 4.99 CFS  
 CN = 89

DA 2 (TO POND) = 2.82 ACRES ( 0.73 ACRES IMPERVIOUS AND 2.09 ACRES PERVIOUS) RETENTION  
 L = 400 FT Q2 (IN) = 3.16 CFS Q2 (OUT) = 0.13 CFS 96%  
 S = 1.00% Q10 (IN) = 6.95 CFS Q10 (OUT) = 0.17CFS 98%  
 TC = 17.2MIN Q100 (IN) = 12.19 CFS Q100 (OUT) = 2.61 CFS 79%  
 CN = 77  
 \* 100 - YEAR PEAK ELEVATION = 652.50'

**PROPOSED FUTURE CONDITIONS (FULL BUILD OUT):**  
 DA 1 (TO EXISTING CATCH BASIN) = 0.80 ACRES ( 0.69 ACRES IMPERVIOUS AND 0.11 ACRES PERVIOUS)  
 L = 300 FT Q2 = 2.58 CFS  
 S = 0.45% Q10 = 4.06 CFS  
 TC = 10.1MIN Q100 = 5.90 CFS  
 CN = 95

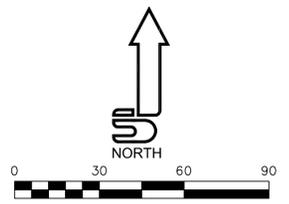
DA 2 (TO POND) = 2.82 ACRES ( 2.24 ACRES IMPERVIOUS AND 0.58 ACRES PERVIOUS) RETENTION  
 L = 400 FT Q2 (IN) = 8.78 CFS Q2 (OUT) = 0.18 CFS 98%  
 S = 1.00% Q10 (IN) = 14.18 CFS Q10 (OUT) = 3.05 CFS 78%  
 TC = 9.4 MIN Q100 (IN) = 20.88 CFS Q100 (OUT) = 5.41 CFS 74%  
 CN = 93  
 \* 100 - YEAR PEAK ELEVATION = 652.50'

**TOTAL DEVELOPED FLOWS**  
 Q2 = 2.77 CFS  
 Q10 = 7.13 CFS  
 Q100 = 11.26 CFS

DEAD STORAGE VOLUME = 3791 CF  
 WATER QUALITY VOLUME = 13251 CF  
 PERMANENT POOL ELEVATION = 648.3 FT

**BENCHMARK**  
 TOP NUT OF FIRE HYDRANT ON THE SOUTH SIDE OF FRONTENAC DRIVE, AT THE NORTHWEST CORNER OF THE ANYTIME FITNESS PARKING LOT.  
 ELEVATION= 659.81  
 NAVD 88 VERTICAL DATUM

CALL BEFORE YOU DIG  
 GOPHER STATE ONE CALL  
 TWIN CITY AREA 651-454-0002  
 MIN. TOLL FREE 1-800-252-1166



**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
 1203 Main Street Red Wing, MN 55066  
 ph. 651.388.1558 fax 651.388.1559

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
 Steven P. Voigt, PE  
 DATE 3/3/16 REG. NO. 20034

DESIGNED	SPV	REVIS	BY	DATE	LATEST REVISION:
DRAWN	SPD	CHANGES FOR PHASED CONSTRUCTION	SPD	3/21/2016	Prepared For:
CHECKED	MSJ				BRICKL BROTHERS
					400 BRICKL ROAD
					PO BOX 125
					WEST SALEM, WI 54669
					PHONE:

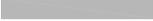
VEH PROPERTIES  
 919 SHIVES ROAD  
 WINONA, MINNESOTA

## HYDROLOGY PLAN

# VEH PROPERTIES

## LEGEND

These standard symbols will be found in the drawing.

-  EXISTING PROPERTY LINE
-  PROPOSED CONCRETE
-  PROPOSED BITUMINOUS
-  PROPOSED LANDSCAPE AREA
-  PROPOSED PHASE BOUNDARY

## SITE CONDITIONS

ZONED B3  
 TOTAL AREA.....3.61 ACRES (157408 S.F.)  
 PRE-DEVELOPMENT.....100% PERVIOUS ( 3.61 ACRES)  
 POST-DEVELOPMENT..... 20% PERVIOUS (0.73 ACRES)  
 80% IMPERVIOUS ( 2.88 ACRES)

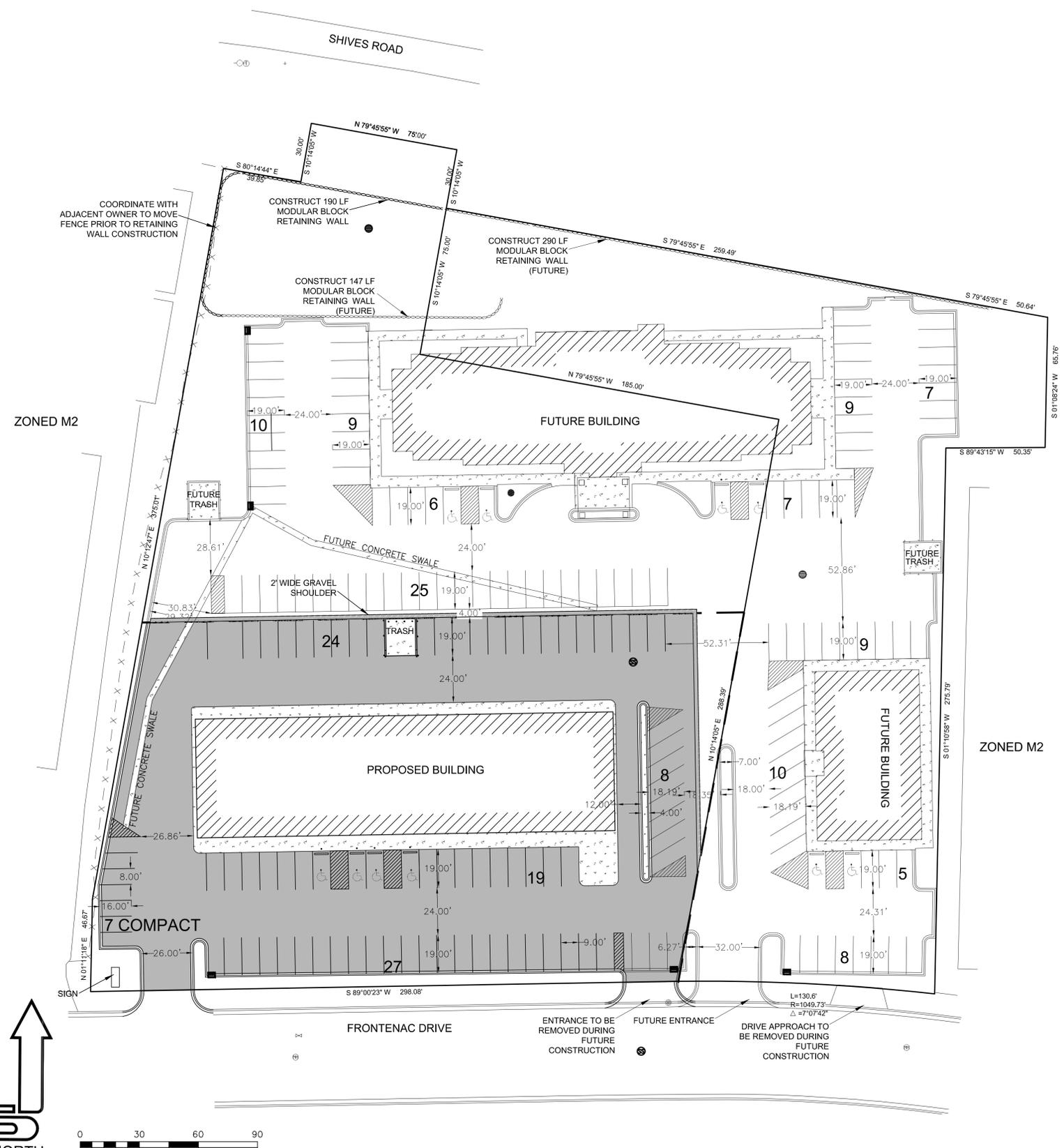
TOTAL BUILDING FOOTPRINT.....29964 S.F.  
 TOTAL BITUMINOUS AREA.....84230 S.F. (NOT INCLUDING STREET REPAIR)  
 TOTAL CONCRETE AREA.....11283 S.F.  
 TOTAL LANDSCAPE AREAS.....31931 S.F.

## PARKING REQUIREMENTS (PER CHAPTER 43, 43.36)

HOTEL (FUTURE).....75 UNITS @ 1 PER UNIT= 75 STALLS INCLUDING 3 ADA . (PLANNED 73 WITH 4 ADA)  
 RESTAURANT (FUTURE).....4540 S.F @ 1 PER 200 S.F.= 23 STALLS INCLUDING 1 ADA. (PLANNED 32 WITH 2 ADA)  
 MIXED USE RETAIL BUILDING.....6212 S.F @ 1 PER 200 S.F = 32 STALLS INCLUDING 2 ADA  
 6508 S.F @ 1 PER 150 S.F = 44 STALLS INCLUDING 2 ADA (PLANNED 85 WITH 4 ADA)  
 TOTALS.....174 STALLS INCLUDING 8 ADA (PLANNED 190 WITH 10 ADA)

## STRIPING NOTES

- STANDARD STALL DEMINIONS ARE 9' WIDE BY 19' LONG. ALL STALL SIZES SHALL COMPLY WITH WINONA CITY CODE CHAPTER 43 TABLE 43.37. (SEE SITE PLAN)
- STRIPE 10 HC SYMBOLS. STRIPE ADJACENT 8' NO-PARKING SPACES. PLACE HC SIGNS ON STEEL POST BEHIND CURB 60 TO 66 INCHES ABOVE PARKING SURFACE TO BOTTOM OF SIGN.
- PAINT STRIPES SHALL BE 4" WIDE PAINTED WHITE.



CALL BEFORE YOU DIG  
 GOPHER STATE  
 ONE CALL  
 TWIN CITY AREA 651-454-0002  
 MINN. TOLL FREE 1-800-252-1166

**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
 1203 Main Street Red Wing, MN 55066  
 ph. 651.388.1558 fax 651.388.1559

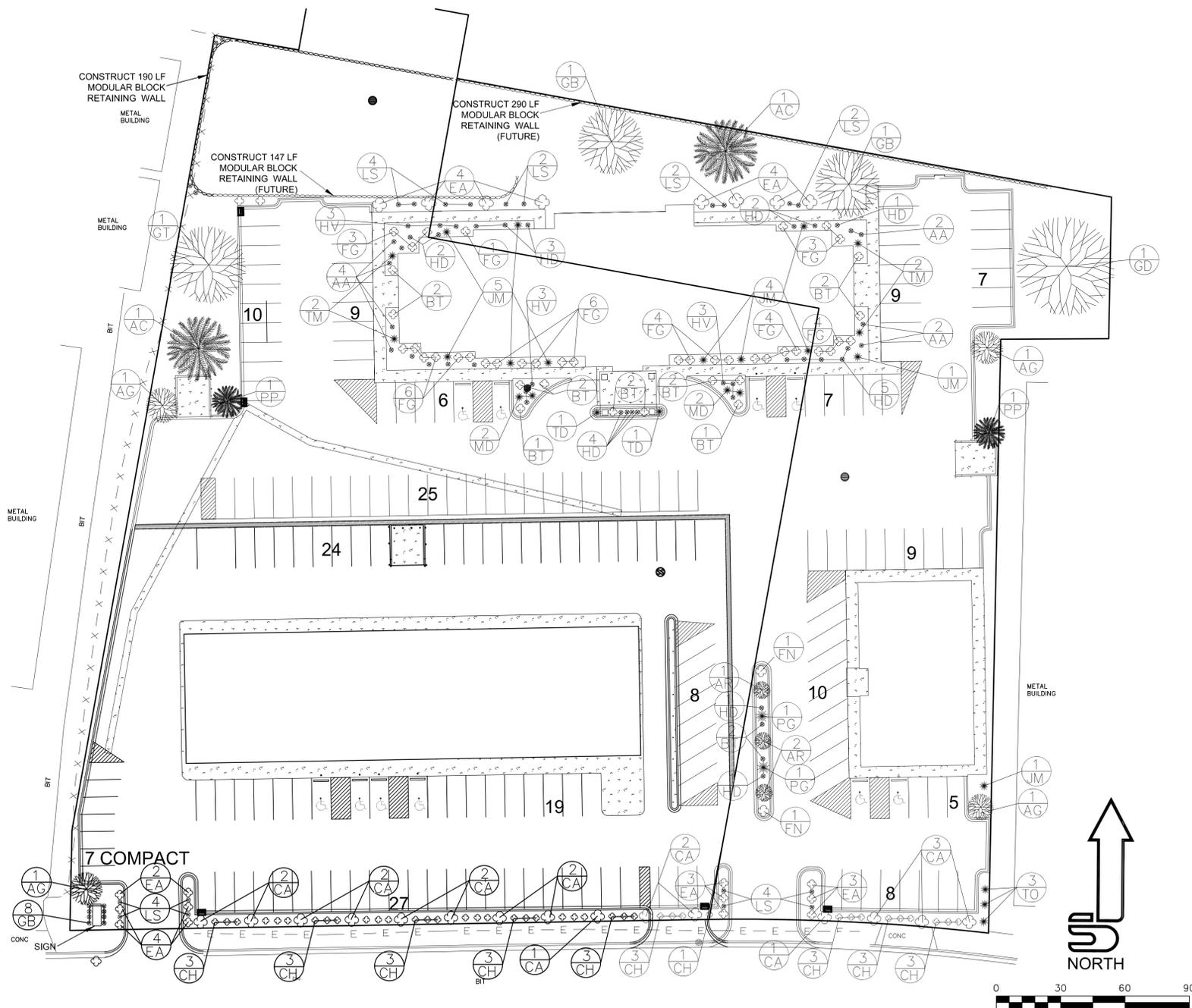
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
 Steven P. Voigt, PE  
 DATE 3/3/16 REG. NO. 20034

DESIGNED	SPV	REVIS	BY	DATE	LATEST REVISION:
DRAWN	SPD	CHANGES FOR PHASED CONSTRUCTION	SPD	3/21/2016	Prepared For:
CHECKED	MSJ				BRICKL BROTHERS
					400 BRICKL ROAD
					PO BOX 125
					WEST SALEM, WI 54669
					PHONE:

VEH PROPERTIES  
 919 SHIVES ROAD  
 WINONA, MINNESOTA

SITE AND STRIPING PLAN

SHEET 4 OF 10 SHEETS



**LANDSCAPE PLAN NOTES**

- ALL STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" SHALL BE USED AS THE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS.
- PLANT ESTABLISHMENT PERIOD (PEP) IS 12 MONTHS FROM THE TIME OF ACCEPTANCE. THE CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE DURING THIS TIME, AND SHALL PLACE REPLACE ALL DEAD MATERIAL DURING PEP.
- ALL PLANT MATERIAL SHALL BE BALLED AND BURLAPPED, OR CONTAINER GROWN ALL PLANT MATERIAL SHALL BE HEALTHY, FREE OF DISEASE AND PEST.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING ALL PLANT MATERIALS AND LAWN DURING PEP. THIS INCLUDES WATERING, MULCHING, SPRAYING, OR FERTILIZING ALL LAWN AND PLANT MATERIALS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THIS PLAN BEFORE PRICING THIS PLAN.
- ONLY THE DEVELOPER/ OWNER MAY SUBSTITUTE ANY SPECIES OR QUANTITIES SHOWN ON THIS PLAN.
- ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE DEVELOPER/ OWNER BEFORE, DURING, AND AFTER PLANTING.

*FUTURE TREE SCHEDULE*

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
3	AR	Acer rubrum	Red Rocket Maple	2 1/2" Caliper
3	AG	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2 1/2" Caliper
2	GB	Ginkgo biloba	Ginkgo	2 1/2" Caliper
1	GD	Gymnocladus dioica	Kentucky Coffeetree	2 1/2" Caliper
1	GT	Gleditsia triacanthos, var. inermis 'Impcole'	Imperial Honeylocust	2 1/2" Caliper
2	PP	Picea pungens	Colorado Spruce	2 1/2" Caliper
2	AC	Abies concolor	White Fir	2 1/2" Caliper

*FUTURE SHRUB AND PERENNIAL SCHEDULE*

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
4	AA	Astilbe x arendsii	Astilbe	#1
12	BT	Berberis thunbergii	Barberry	#3
4	CA	Cornus alba 'Bud's Yellow'	Bud' Yellow Dogwood	#3
13	CH	Cornus hessi 'Garden Glow'	Garden Glow Dogwood	#3
16	EA	Euonymus alatus 'Compactus'	Dwarf Burning Bush	#3
35	FG	Forsythia 'Gold Tide'	Gold Tide Forsythia	#1
2	FN	Forsythia 'northern Gold'	Northern Gold Forsythia	#3
19	HD	Hermercallis	Daylilly (use multiple colors)	#1
9	HV	Heuchera villosa	Coral Bells	#1
11	JM	Juniperus x media 'Daub's Frosted'	Daub's Frosted Juniper	#3
14	LS	Liatris spicata	Gayfeather	#1
4	MD	Microbiota decussata	Russian Cypress	#3
2	PG	Picea pungens 'Glauca Globosa'	Globe Blue Spruce	#3
4	TM	Taxus x media 'citation'	Citation Yew	#3
2	TD	Taxus x media 'dark green'	Dark Green Yew	#3

**LEGEND**

These standard symbols will be found in the drawing.

- PROPOSED CONIFEROUS TREE
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS SHRUB
- PROPOSED DECIDUOUS SHRUB
- PROPOSED PERENNIAL
- LANDSCAPE KEY

**TREE SCHEDULE**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
1	AG	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2 1/2" Caliper

**SHRUB AND PERENNIAL SCHEDULE**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
9	CA	Cornus alba 'Bud's Yellow'	Bud' Yellow Dogwood	#3
27	CH	Cornus hessi 'Garden Glow'	Garden Glow Dogwood	#3
4	EA	Euonymus alatus 'Compactus'	Dwarf Burning Bush	#3
4	LS	Liatris spicata	Gayfeather	#1
8	HD	Hermercallis	Daylilly (use multiple colors)	#1

**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
 1203 Main Street Red Wing, MN 55066  
 ph. 651.388.1558 fax. 651.388.1559

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
 Steven P. Voigt, PE  
 DATE 3/3/16 REG. NO. 20034

DESIGNED	SPV	REVIS	BY	DATE	LATEST REVISION:
DRAWN	SPD	CHANGES FOR PHASED CONSTRUCTION	SPD	3/21/2016	Prepared For:
CHECKED	MSJ				BRICKL BROTHERS
					400 BRICKL ROAD
					PO BOX 125
					WEST SALEM, WI 54669
					PHONE:

VEH PROPERTIES  
 919 SHIVES ROAD  
 WINONA, MINNESOTA

**LANDSCAPING PLAN**

# B



## CITY HALL

207 Lafayette Street  
P.O. Box 378  
Winona, MN 55987-0378  
FAX: 507/457-8212

April 1, 2016

Paul and/or Tim Van Eijl  
VEH Frontenac LLC  
225 W. Clyde  
Holmen, WI 54636

To Whom It May Concern:

City staff has received and reviewed the site plan submittal for a retail center at 919 Shives Road. At this time site plan approval is denied, pending the items listed below:

1. Please verify the soil types on column one of sheet two.
2. Long term operation and maintenance of the stormwater facilities remains with the property owner - this must be changed on column one of sheet two.
3. The "receiving surface water" is County Ditch #4 – not #7. This must be changed on column one of sheet two.
4. All liquid waste from concrete washout shall be disposed of on-site (not on a street surface) in accordance with BMPs and the NPDES permit. This must be changed on column three of sheet two.
5. Please examine contours to the north of proposed building on the Hydrology Plan and correct as appropriate.
6. The westerly sanitary sewer shown on the Utility Plan needs to be removed. Please reference attachment one to this letter.
7. A manhole is required on the sanitary sewer line in the location shown on the attachment. Also, the building's connection to the line may be made directly as shown on attachment one.
8. Three additional water valves must be added in the locations shown on attachment one. In addition, consider an 8" water line connection to the main. Contact Bob Dunn in the Water Department with questions at 457-8270.
9. W-2 may be eliminated and the existing connection to the water main used as shown in attachment one. Contact Bob Dunn in the Water Department with questions at 457-8270.
10. Confirm on-site lighting will be a maximum of 30' in height and will employ full cut-off style lights.
11. Confirm outside trash enclosure will be a minimum of 6' in height.

Please address these items with six hard copies of a revised site plan submittal.

In addition, as you are aware, a petition for Planning Commission review has been received (attachment two). In accordance with City Code, the site plan will be reviewed at the Planning Commission meeting on April 11 at 4:30 p.m. in City Hall. Please let me know if you have any additional questions about this process. The site plan must be approved by the Commission and the items listed above must be acceptably addressed prior to final site plan approval.

Please also note that future plans related to the overall site should note relocation of the fire hydrant and valve in the southeast corner of the site and show an emergency vehicle/fire access to Shives Road in the northeast corner of the site.

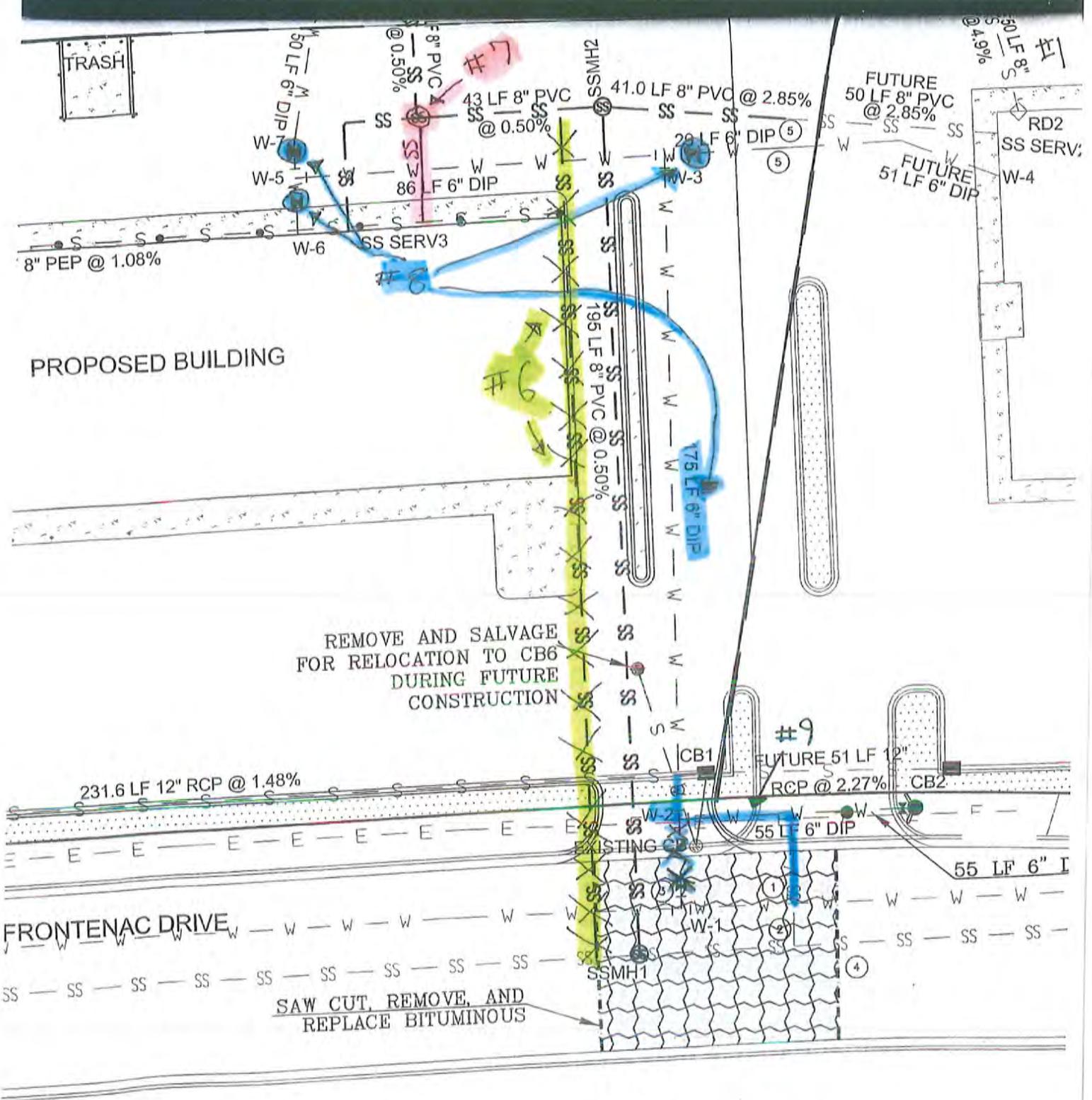
Sincerely,



Carlos Espinosa  
City Planner

#### Attachments

CC: Steven Voight, Johnson & Scofield, Inc.  
Jerry Papenfus, JP Corp  
Jason Skifton, Brickl Bros. Inc.  
Greg Karow, Building Official



PLAN, PREPARED BY  
 REVISION AND I  
 SIONAL ENGINEER  
 TE OF /

DESIGNED	SPV
DRAWN	SPD

REVISED	BY	DATE
CHANGES FOR PHASED CONSTRUCTION	SPD	3/21/2016

LATEST REVISION:  
 Prepared For:  
 BRICKL BROTHERS  
 400 BRICKL ROAD  
 PO BOX 125

March 29, 2016

To: Winona City Planning Staff

I would like to request the Winona City Planning Commission review the site plan for VEH Frontenac LLC 919 Shives Road to review its consistency with the 2007 Comprehensive Plan.

- Part 12 Transportation Plan
  - Goal #4: Non-motorized transportation: Establish a safe and efficient non-motorized transportation system that accesses all parts of Winona and the regional trails network.
    - Objective 1: Expand the City's network of sidewalks and crosswalks in order to provide comfortable and safe pedestrian access throughout Winona.

Sincerely,



Mandi Olson

C

March 29, 2016

To: Winona City Planning Staff

I would like to request the Winona City Planning Commission review the site plan for VEH Frontenac LLC 919 Shives Road to review its consistency with the 2007 Comprehensive Plan.

- Part 12 Transportation Plan
  - Goal #4: Non-motorized transportation: Establish a safe and efficient non-motorized transportation system that accesses all parts of Winona and the regional trails network.
    - Objective 1: Expand the City's network of sidewalks and crosswalks in order to provide comfortable and safe pedestrian access throughout Winona.

Sincerely,

A handwritten signature in cursive script that reads "Mandi Olson".

Mandi Olson



#### 42.05 IMPROVEMENTS

- (a) Required Minimum Improvements. Minimum improvements shall be installed:
- (a) In the case of subdivisions within the city, in accordance with the requirements of Appendix I;
- (d) Sidewalks. Sidewalks are not required on all streets. If sidewalks are required by the city council, the developer shall pay for the same. The same regulations that apply for curb and gutter under subsection (e) above shall apply for sidewalk. All work must be guaranteed for a period of two years by the contractor and backed by a performance bond.

# VEH PROPERTIES

## LEGEND

These standard symbols will be found in the drawing.

	EXISTING PROPERTY MONUMENTATION		PROPOSED FINISH FLOOR ELEVATION
	EXISTING FENCE		PROPOSED CONCRETE
	PROPOSED SILT FENCE		PROPOSED BITUMINOUS
	PROPOSED INLET PROTECTION		PROPOSED LANDSCAPE AREA
	EXISTING STORM MANHOLE AND LINE		PROPOSED GRAVEL
	EXISTING CATCH BASIN		PROPOSED RIP RAP
	EXISTING YARD HYDRANT AND WATER LINE		PROPOSED CONIFEROUS TREE
	EXISTING SANITARY MANHOLE AND LINE		PROPOSED DECIDUOUS TREE
	EXISTING TELEPHONE PEDESTAL		PROPOSED CONIFEROUS SHRUB
	PROPOSED STORM INLET		PROPOSED DECIDUOUS SHRUB
	EXISTING CATCH BASIN		LANDSCAPE KEY
	EXISTING CONTOUR OF ELEVATION		PROPOSED CONCRETE REMOVAL
	PROPOSED SANITARY MANHOLE AND LINE		PROPOSED CURB REMOVAL
	PROPOSED WATER MANHOLE, LINE, AND YARD HYDRANT		PROPOSED BITUMINOUS REMOVAL
	PROPOSED STORM MANHOLE AND LINE		SOIL BORE LOCATION
	PROPOSED GAS LINE		
	PROPOSED RETAINING WALL		
	PROPOSED 1 FOOT CONTOUR		
	PROPOSED 5 FOOT CONTOUR		
	PROPOSED DRAINAGE ARROW		
	ROAD CENTERLINE		
	ROAD RIGHT OF WAY		
	PROPOSED CATCH BASIN		
	PROPOSED & FUTURE CROSS-WALK		

### State of Minnesota GOVERNING SPECIFICATIONS

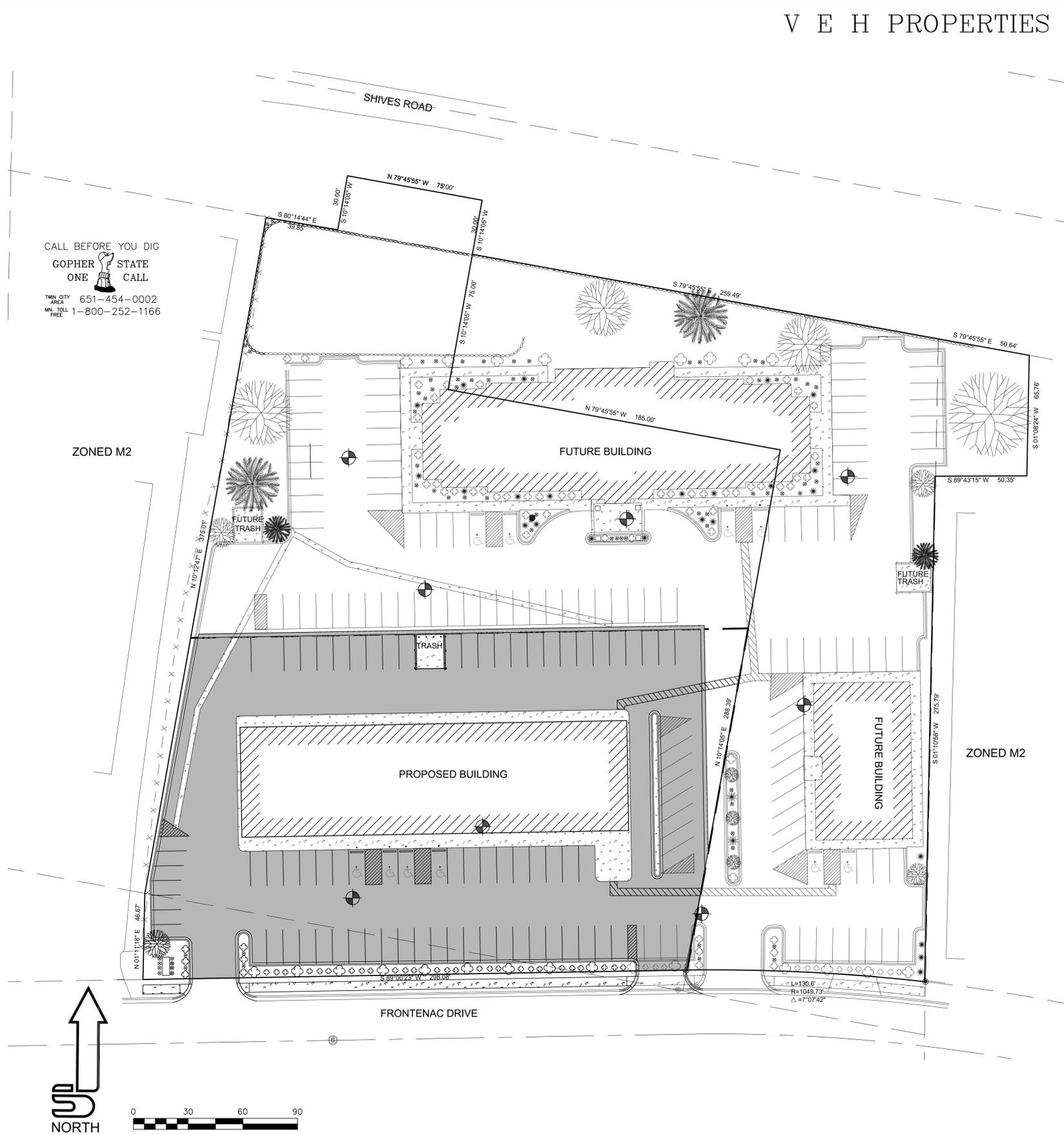
The 2016 edition of the Minnesota Department of Transportation "Standard Specifications for Construction" shall govern except as modified by special provision.

### INDEX TO PLAN SHEETS

Sheet Title	Sheet. No.
TITLE SHEET	1
SWPPP	2
HYDROLOGY PLAN	3
SITE PLAN	4
GRADING & EROSION CONTROL PLAN	5
UTILITY PLAN	6
LANDSCAPE, PAVING, AND STRIPING PLAN	7
STANDARD DETAILS	8-10
This plan contains 10 Total sheets	

### NOTES:

- NO CONSTRUCTION MAY BEGIN UNTIL EROSION AND SEDIMENT CONTROLS ARE IN PLACE AND APPROVED BY THE CITY.
- NO CONSTRUCTION MAY BEGIN UNTIL A PRECONSTRUCTION MEETING IS HELD WITH THE CITY.
- PREVAILING SPECIFICATIONS: CITY OF WINONA, MN MUTCD, MNDOT SPECIFICATIONS, CEAM SPECIFICATIONS.
- NO CHANGES SHALL BE MADE TO APPROVED PLANS WITHOUT WRITTEN CONSENT OF THE CITY.
- ONLY CITY EMPLOYEES ARE PERMITTED TO OPERATE VALVES AND HYDRANTS.
- ELEVATIONS FOR CONNECTING TO EXISTING STUBS FOR SANITARY SEWER, WATER, AND STORM SEWER WILL NEED TO BE FIELD VERIFIED. EXISTING "AS BUILT" INFO FROM BOTH THE CITY OF WINONA AND TOPOGRAPHIC SURVEY.



CALL BEFORE YOU DIG  
GOPHER STATE  
ONE CALL

TWIN CITY AREA 651-454-0002  
MN. TOLL FREE 1-800-252-1166

ZONED M2

ZONED M2



FILE PATH \\HD2\Storage\Share\STR\CERTS\107-7\25\BRICKL

**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
1203 Main Street Red Wing, MN 55066  
ph. 651.388.1558 fax 651.388.1559

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
Steven P. Voigt, PE  
DATE 3/3/16 REG. NO. 20034

REVISED	BY	DATE	LATEST REVISION: 4/04/2016
CHANGES FOR PHASED CONSTRUCTION	SPD	3/21/2016	Prepared For:
CHANGES PER CITY COMMENTS	SPV	4/04/2016	BRICKL BROTHERS
			400 BRICKL ROAD
			PO BOX 125
			WEST SALEM, WI 54669
			PHONE:

**VEH PROPERTIES**  
**919 SHIVES ROAD**  
**WINONA, MINNESOTA**

**COVER SHEET**

SHEET 1 OF 10 SHEETS

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

THIS SWPPP MUST REMAIN ON-SITE THROUGHOUT PROJECT CONSTRUCTION INCLUDING INSPECTION LOGS AND DOCUMENTED AMENDMENTS TO THE SWPPP

LOCATION OF PROPOSED WORK: (BRIEF DESCRIPTION OF WHERE CONSTRUCTION ACTIVITY WILL OCCUR)

CITY OR TOWNSHIP: WINONA STATE: MN ZIP CODE: 55987 COUNTY: WINONA

DESCRIPTION OF THE NATURE OF CONSTRUCTION ACTIVITY:

WATERMAIN, SANITARY SEWER, STORM SEWER, PARKING LOT & STREET CONSTRUCTION FOR VEH FRONTENAC LLC.

DESCRIPTION OF LAND FEATURE CHANGE:

TOTAL PROJECT AREA = 3.61 ACRES  
DISTURBED AREA FOR CONSTRUCTION ACTIVITY = 3.61 ACRES  
CHANGE IN IMPERVIOUS SURFACE AREA = 2.88 ACRES (INCREASE)

DESCRIPTION OF PROJECT SOIL TYPES:

THIS PROJECT HAS ROUGHLY 80% PSAMMENTS FILL AND 20% SHILOH SILT LOAM, PONDED SOILS. THE UNDERLYING SOILS ARE SWAMP DEPOSIT OF SILTY SAND AND SANDY CLAYS, EXCEPT FOR THE SAND FILL, SOIL TYPES ARE POORLY DRAINED. THE ENTIRE PROJECT AREA IS DEEP SILTY SAND AND SANDY CLAYS.

DEPTH TO GROUNDWATER IS LESS THAN 5 FEET IN SOME AREAS AND GREATER THAN 12 FEET IN OTHERS AND THE DEPTH TO A RESTRICTIVE LAYER, INCLUDING BEDROCK IS GREATER THAN 7 FEET.

SWPPP IMPLEMENTATION RESPONSIBILITY:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN AND SHALL IDENTIFY AN EROSION CONTROL SUPERVISOR TO OVERSEE THIS. THE EROSION CONTROL SUPERVISORS DUTIES INCLUDE IMPLEMENTING, REVISING AND AMENDING THE SWPPP, AND PERFORMING INSPECTIONS AS REQUIRED IN PART IVE OF THE NPDES GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY. HE SHALL ALSO BE AVAILABLE FOR ON-SITE INSPECTIONS WITHIN 72 HOURS UPON REQUEST OF THE MPCA. THE EROSION CONTROL SUPERVISOR SHALL BE KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMP'S AND OVERSEE THE INSTALLATION, INSPECTION AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMP'S, BEFORE AND DURING CONSTRUCTION. SHALL CONTINUE UNTIL THE PROJECT IS COMPLETE. THE ENTIRE SITE HAS UNDERGONE FINAL STABILIZATION, AND A "NOTICE OF TERMINATION" HAS BEEN SUBMITTED TO THE MPCA IN CONFORMANCE WITH PART IIC OF THE NPDES PERMIT. APPROPRIATE TRAINING DOCUMENTATION FOR THE EROSION CONTROL SUPERVISOR SHALL BE RECORDED IN THE SWPPP AS REQUIRED IN PART IIA.2 OF THE NPDES PERMIT. ALL WORK CONSIDERED NECESSARY TO FULLY COMPLY WITH THE REQUIREMENTS OF IMPLEMENTING THE SWPPP SHALL BE CONSIDERED INCIDENTAL AND NO DIRECT COMPENSATION SHALL BE MADE FORSAID WORK.

LONG TERM OPERATION AND MAINTENANCE:

THE CONTACT LISTED BELOW SHALL BE RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM AFTER A "NOTICE OF TERMINATION" HAS BEEN SUBMITTED TO THE MPCA BY THE PROJECT CONTRACTOR.

RESPONSIBLE PARTY: VEH FRONTENAC LLC  
ADDRESS: 225 W. CLYDE, HOLMEN, WI 54636  
TM OR FALL VAN EIL  
PHONE: 608-385-5371

PROJECT CONTACTS:

OWNER: VEH PROPERTIES  
CONTACT PERSON: TIM VAN EIL  
PHONE: 608-385-5371

ENGINEER: JOHNSON & SCOFIELD, INC.  
CONTACT PERSON: STEVEN P. VOIGT, PE  
PHONE: (651) 388-1558, EXT. 103

PREPARER OF SWPPP: JOHNSON & SCOFIELD, INC.  
CONTACT PERSON: STEVEN P. VOIGT, PE  
PHONE: (651) 388-1558, EXT. 103  
TRAINING: U OF M DESIGN OF CONSTRUCTION SWPPP (EXPIRATION MAY 31,2017)

CONTRACTOR: (TO BE COMPLETED BY CONTRACTOR WHEN APPLYING FOR NPDES PERMIT)

EROSION CONTROL SUPERVISOR: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
TRAINING: \_\_\_\_\_

AGENCY CONTACTS:

MPCA 24-HOUR EMERGENCY NOTIFICATION (STATE DUTY OFFICER)  
PHONE: (800) 422-0798

MPCA MPCA STAFF CONTACT (WINONA, OLUMSTED, FILLMORE, AND HOUSTON COUNTIES)  
CONTACT PERSON: ROBERTA GEIMAN  
PHONE: (507) 206-2629

DNR MN DNR AREA HYDROLOGIST (FILLMORE, HOUSTON, OLMSTED, AND WINONA COUNTIES)  
CONTACT PERSON: COREY HANSON  
PHONE: (507) 206-2854

DRAINAGE CALCULATIONS:

ALL DRAINAGE CALCULATIONS PERTINENT TO THE DESIGN OF THIS PROJECT ARE KEPT ON FILE AT THE OFFICE OF THE PROJECT ENGINEER. ALL CHANGES MADE IN THE FIELD POTENTIALLY AFFECTING PROJECT DRAINAGE SHALL BE DISCUSSED WITH THE PROJECT ENGINEER AND NOTED IN THE CONTRACTORS SWPPP RECORDS.

ENVIRONMENTALLY SENSITIVE AREAS:

ALL ENVIRONMENTALLY SENSITIVE AREAS, INCLUDING WETLANDS, RIVERS, STREAMS AND LAKES, ARE LABELED AS "ENVIRONMENTALLY SENSITIVE AREAS" IN THE PLANS.

RECEIVING SURFACE WATERS:

THE TABLE BELOW IDENTIFIES ALL SURFACE WATERS WITHIN ONE MILE OF THE PROJECT BOUNDARY THAT WILL RECEIVE STORMWATER RUNOFF FROM THE CONSTRUCTION SITE DURING AND AFTER CONSTRUCTION. THE IDENTIFIED SURFACE WATER MAY BE CONSIDERED SPECIAL WATERS AS LISTED IN APPENDIX A OF THE NPDES PERMIT AND/OR IMPAIRED WATERS AS IDENTIFIED UNDER SECTION 303 (d) OF THE FEDERAL CLEAN WATER ACT. SPECIAL WATERS HAVE QUALITIES THAT THE MINNESOTA POLLUTION CONTROL AGENCY FEEL WARRANT EXTRA PROTECTION MEASURES, AND IMPAIRED WATERS ARE BODIES OF WATER THAT DO NOT MEET THE WATER QUALITY STANDARDS SET UP FOR THEIR DESIGNATED USE AS DETERMINED BY THE STATE DUE TO THE PRESENCE OF POLLUTANTS OR STRESSORS INCLUDING PHOSPHORUS, TURBIDITY, DISSOLVED OXYGEN, AND BIOTIC IMPAIRMENT. STORMWATER FROM A DISCHARGE POINT ON THE PROJECT THAT FLOWS TO A SURFACE WATER IDENTIFIED AS SPECIAL AND/OR IMPAIRED WILL REQUIRE IMPLEMENTATION OF ADDITIONAL BMP'S OUTLINED IN APPENDIX A PART C OF THE NPDES PERMIT.

RECEIVING SURFACE WATER	TYPE (DITCH, POND WETLAND, LAKE STREAM, RIVER)	SPECIAL WATER (YES/NO)	IMPAIRED WATER (YES/NO) IMPAIRMENT IF YES
CHIVES CREEK ( COUNTY DITCH # 4)	DITCH	NO	NO

DISCHARGES TO WETLANDS:

THERE ARE NO KNOWN STORMWATER DISCHARGES WITH THE POTENTIAL FOR SIGNIFICANT ADVERSE IMPACT TO A WETLAND UNDER THIS PROJECT.

OUTSTANDING RESOURCE VALUE WATERS:

THERE ARE NO KNOWN STORMWATER DISCHARGES TO OUTSTANDING RESOURCE VALUE WATERS UNDER THIS PROJECT.

CALCAREOUS FENS:

THERE ARE NO KNOWN STORMWATER DISCHARGES TO CALCAREOUS FENS UNDER THIS PROJECT

KARST REGIONS:

THERE ARE NO KNOWN KARST FEATURES (SINKHOLES, BLIND VALLEYS, MAPPED CAVES, SPRINGS, OR KARST WINDOWS) WITHIN THE PROJECT SITE.

TABLE OF ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	UNITS	TOTAL ESTIMATED QUANTITY
1	SILT FENCE	LF	1650
2	INLET PROTECTION	EA	8
3	ROCK CONSTRUCT ENT	EA	2
4	ROCK CHECK DAM	EA	2

NPDES STORM WATER PERMIT NOTES:

THIS PROJECT IS REGULATED BY THE CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER AS ISSUED BY THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA), THE PROVISIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA), ANY REGULATIONS AND REQUIREMENTS OF LOCAL GOVERNING AGENCY'S HAVING JURISDICTION CONCERNING EROSION AND SEDIMENT CONTROL, AND THE PROVISIONS OF THE PROJECT PLANS AND SPECIFICATIONS. THESE CONDITIONS AND PROVISIONS MUST BE UNDERSTOOD AND FOLLOWED BY THE GENERAL CONTRACTOR AS WELL AS ANY SUBCONTRACTORS INVOLVED WITH A CONSTRUCTION ACTIVITY THAT DISTURBS THE SITE SOIL OR WHO IMPLEMENT A POLLUTION CONTROL MEASURE IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). SOME OF THE CONTRACTORS RESPONSIBILITIES INCLUDE:

1. APPLY FOR AND OBTAIN WITH THE OWNER A "NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM" (NPDES) PERMIT AS ISSUED BY THE MPCA PRIOR TO STARTING WORK AS REQUIRED BY THE PERMIT.
2. HAVE THE "NOTICE OF STORM WATER PERMIT COVERAGE" LETTER ON SITE.
3. HAVE THE "STORM WATER POLLUTION PREVENTION PLAN" (SWPPP) ON SITE.
4. PROVIDE A TRAINED AND CERTIFIED EROSION CONTROL SUPERVISOR TO OVERSEE THE IMPLEMENTATION OF THE SWPPP PROVISIONS DURING CONSTRUCTION FOR BOTH THE CONTRACTOR AND SUBCONTRACTORS OPERATIONS.
5. COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, REGULATIONS, ORDERS AND DECREES PERTAINING TO EROSION CONTROL, SEDIMENT CONTROL, AND STORM WATER MANAGEMENT AFFECTING THE CONDUCT OF WORK ON THIS PROJECT.
6. COMPLY WITH ALL EROSION AND SEDIMENT CONTROL REQUIREMENTS OF THE SWPPP AS OUTLINED IN THE PROJECT PLANS AND SPECIFICATIONS AS REQUIRED BY THE "NPDES" PERMIT.
7. PERFORM SITE INSPECTION PER PERMIT REQUIREMENTS AND AS OUTLINED BELOW.
8. SEND IN "NOTICE OF TERMINATION" (N.O.T.) TO MPCA UPON PROJECT COMPLETION AND PER PERMIT REQUIREMENTS.

THE CONTRACTOR SHALL PLACE AND MAINTAIN ALL BEST MANAGEMENT PRACTICES IN THE STORM WATER POLLUTION PREVENTION PLAN TO MINIMIZE THE POTENTIAL FOR EROSION OF SITE SOILS AND PREVENT THE TRANSPORT OF SILT FROM THE SITE AS A MINIMUM, THE CONTRACTOR SHALL SUPPLY ADDITIONAL STORM WATER CONTROL MEASURES IF FOUND NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

EROSION PREVENTION PRACTICES:

THE CONTRACTOR SHALL PREPARE AND SUBMIT A SCHEDULE OF PROPOSED EROSION CONTROL ACTIVITIES FOR THE ENGINEER'S APPROVAL. THE ENGINEER MAY REQUIRE SCHEDULES TO BE SUBMITTED ORALLY OR IN WRITING. THE SCHEDULE SHALL PROVIDE A DESCRIPTION OF:

1. PROPOSED EROSION CONTROL INSTALLATIONS AN WHEN THEY WILL BE INSTALLED.
2. AREAS READY FOR PERMANENT TURF ESTABLISHMENT AND WHEN IT WILL BE ACCOMPLISHED.
3. GRADING OPERATIONS AND HOW EROSION CONTROL WILL BE INCORPORATED INTO THE WORK.
4. REPAIR OR MAINTENANCE REQUIRED ON EROSION CONTROL INSTALLATIONS AND WHEN IT WILL BE ACCOMPLISHED.
5. PROPOSED EROSION CONTROL MEASURES DURING PERIODS OF SUSPENSION OF WORK.

THE CONTRACTOR SHALL CONDUCT HIS WORK IN A MANNER WHICH MINIMIZES THE EROSION OF SOIL FROM THE CONSTRUCTION SITE BY IMPLEMENTING AVAILABLE BEST MANAGEMENT PRACTICES (BMP'S) INCLUDING, BUT NOT LIMITED TO CONSTRUCTION PHASING, BUFFER STRIPS, HORIZONTAL SLOPE GRADING, WATERING, PIPE INLET PROTECTION, PIPE OULET STABILIZATION, PERIMETER CONTROL MEASURES, SEDIMENTATION BASINS, DITCH CHECKS, SOIL STABILIZATION, ETC.

TEMPORARY EROSION PROTECTION OR PERMANENT COVER SHALL BE PROVIDED YEAR ROUND. ALL EXPOSED SOIL AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (I.E. CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE, STOCKPILES, SAND STOCKPILES) AND THE CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS ANS SIMILAR SURFACES ARE EXEMPT FROM THIS REQUIREMENT.

DISTURBED SOIL AREAS RECEIVING TURF ESTABLISHMENT SHALL BE SEEDED OR SODDED AS DETAILED IN THE PROJECT PLANS AND SPECIFICATIONS. IN AREAS WHICH THE CONTRACTOR CHOOSES TO SCHEDULE FOR FINAL TURF TREATMENT LATER THAN ALLOWED ABOVE, 150 POUNDS PER ACRE OF MN/DOT MIX 21-111 (OATS) OR MIX 21-112 (WINTER WHEAT) SHALL BE SEEDD AS TEMPORARY SOIL COVER, AND FERTILIZER PER MN/DOT 3881 WITH A TYPE 1 OR TYPE 3 FERTILIZER @ 200 POUNDS PER ACRE.

APLAYS TO RECEIVE RAPID STABILIZATION IF APPLICABLE SHALL BE RESTORED TO A SMOOTH ROUGH GRADED CONDITION PRIOR TO APPLYING THE RAPID STABILIZATION METHOD USED.

THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER. STABILIZATION OF THE LAST 200 LINEAL FEET MUST BE COMPLETED WITHIN 24 HOURS AFTER CONNECTION TO SURFACE WATER.

STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES MUST BE COMPLETE WITHIN 7 DAYS AFTER CONNECTING TO A SURFACE WATER AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAD TEMPORARILY OR PERMANENTLY CEASED.

TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM (WITH PROPERLY DESIGNED ROCK DITCH CHECKS, BID ROLLS, SILT DIKES ETC.) DO NOT NEED TO BE STABILIZED. THESE AREAS MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.

PIPE OULETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.

FINAL STABILIZATION:

THE CONTRACTOR SHALL IMPLEMENT CONTINUOUS AND PROGRESSIVE STABILIZATION METHODS TO ENSURE THAT THE SITE IS STABILIZED PER THE REQUIREMENTS IN THE NPDES PERMIT AND THAT FINAL STABILIZATION IS ACHIEVED INCLUDING:

- FINAL STABILIZATION REQUIRES THAT ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND ALL SOILS HAVE BEEN STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OVER THE ENTIRE PREVIOUS SURFACE AREA, OR OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER EROSION CONDITIONS. DORMANT SEEDING DOES NOT ALLOW THE "NOTICE OF TERMINATION" TO BE SUBMITTED TO THE MPCA UNTIL THE 70% COVERAGE REQUIREMENT IS MET.

- THE CONTRACTOR SHALL ENSURE THAT THE PERMANENT STORMWATER TREATMENT SYSTEM, IF REQUIRED, IS WORKING AS DESIGNED TO MEET NPDES PERMIT REQUIREMENTS. THIS IS NOT LIMITED TO A FINAL CLEANOUT OF TEMPORARY OR PERMANENT SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASIN AND FINAL CONSTRUCTION OR MAINTENANCE OF INFILTRATION BASINS. ALL SEDIMENT SHALL BE REMOVED FROM CONVEYANCE SYSTEMS AND DITCHES SHALL BE STABILIZED WITH PERMANENT COVER.

- ALL TEMPORARY SYNTHETIC AND STRUCTURAL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S SHALL BE REMOVED FROM THE SITE. BMP'S DESIGNED TO DECOMPOSE ON THE SITE (SUCH AS SOME COMPOST LOGS) MAY BE LEFT IN-PLACE.

- FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES, FINAL STABILIZATION IF ALLOWED IN THE PROJECT PLANS AND SPECIFICATIONS MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE.

THE METHOD OF ESTABLISHING FINAL STABILIZATION IN TURF AREAS SHALL BE AS OUTLINED IN THE PROJECT PLANS AND SPECIFICATIONS.

SEDIMENT CONTROL PRACTICES:

THE CONTRACTOR SHALL INSTALL ALL NECESSARY SEDIMENT CONTROL ON DOWN GRADIENT AREAS BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITIES OCCUR. THESE SHALL REMAIN IN PLACE UNTIL THE FINAL STABILIZATION HAS BEEN ESTABLISHED.

GRADIENT LAND DISTURBING ACTIVITIES OCCUR. THESE SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

UNBROKEN SLOPE LENGTHS OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 3:1 OR STEEPER SHALL NOT BE PERMITTED ON THE PROJECT IN ORDER TO MINIMIZE THE POTENTIAL OF FORMING HILLS AND/OR GULLIES.

THE CONTRACTOR SHALL REPLACE SEDIMENT CONTROL BMP'S IMMEDIATELY AFTER DISRUPTIVE SHORT-TERM ACTIVITIES, SUCH AS CLEARING/GRUBBING OR VEHICLE PASSAGE, ARE COMPLETE. (NOTE THAT SEDIMENT CONTROL SHALL BE REPLACED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF LAND DISTURBING ACTIVITIES ARE NOT COMPLETE.

THE CONTRACTOR SHALL PROTECT ALL SURFACE WATERS INCLUDING, BUT NOT LIMITED TO, NEW AND EXISTING STORM DRAIN AND TILE INLETS AND CURB AND GUTTER SYSTEMS DURING CONSTRUCTION TO PREVENT SEDIMENT LADEN WATERS FROM ENTERING INTO THEM WITH ENGINEER APPROVED BMP'S UNTIL ALL SOURCES WITH A POTENTIAL FOR DISCHARGING SEDIMENT TO THE SURFACE WATER HAVE BEEN STABILIZED.

TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS, AND CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB & GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.

ALL AREA ROADS SHALL BE MAINTAINED IN A SEDIMENT FREE CONDITION BY IMPLEMENTING BMP'S SUCH AS STONE PADS, CONCRETE OR STEEL WASH RACKS, OR EQUIVALENT SYSTEMS. WHEN THE USE OF APPROPRIATE BMP'S DOES NOT ADEQUATELY PREVENT THE TRACKING OF SEDIMENT INTO THE STREET, STREET SWEEPING WITH A PICKUP BROOM SHALL BE USED.

THE CONTRACTOR SHALL INSTALL TEMPORARY SEDIMENTATION BASINS AS REQUIRED IN PART III.B OF THE NPDES PERMIT IF SITE CONDITIONS REQUIRE SAID CONSTRUCTION.

DEWATERING AND BASIN DRAINING:

DEWATERING OR BASIN DRAINING (I.E. PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) RELATE TO PROJECT CONSTRUCTION ACTIVITY THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE WATER MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. DISCHARGES FROM THE TEMPORARY OR PERMANENT SEDIMENTATION BASIN MUST BE VISUALLY CHECKED TO ENSURE ADEQUATE TREATMENT IS OBTAINED IN THE BASIN AND THAT NUISANCE CONDITIONS WILL NOT RESULT FROM THE DISCHARGE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH APPROPRIATE BMP'S SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM LANDOWNERS. THE CONTRACTOR MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SANDBAGS, PLASTIC SHEETING, OR OTHER ACCEPTED ENERGY DISSIPATING MEASURES. ADEQUATE SEDIMENTATION BMP'S ARE REQUIRED TO REMOVE SUSPENDED SOLIDS FROM DISCHARGE WATER TO APPROVED MPCA LIMITS PRIOR TO DISCHARGING TO A SURFACE WATER.

ALL WATER FROM DEWATERING OR BASIN DRAINING ACTIVITIES MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR DOWNSLOPE PROPERTIES, OR INUNDATION OF WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACTS TO THE WETLAND.

POLLUTION PREVENTION MANAGEMENT MEASURES:

SOLID WASTE:

COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.

HAZARDOUS MATERIALS:

OIL, GASOLINE, PAINT AND ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGES. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.

FUELING AREAS SHALL BE LOCATED ON LEVEL GRADE AND 50 FEET AWAY FROM LOCATIONS WITH A CONTINUOUS POSITIVE GRADE TO WATERBODIES. THE CONTRACTOR SHALL PROVIDE ADEQUATE SUPPLIES OF ABSORBENT SPILL CLEAN-UP MATERIALS AND SPILL KITS IN FUELING AREAS AND ON MOBILE FUELING EQUIPMENT TO CONTAIN ANY FORTSEEABLE SPILLS.

EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED AND WASTE PROPERLY DISPOSED OF. NO ENGINED DEGREASING SHALL BE ALLOWED.

CONCRETE WASHOUT AND WASHOFF ONSITE:

LIQUID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS FROM TRUCKS, HOPPERS AND PUMPS SHALL NOT CONTACT THE GROUND, NOR SHALL THERE BE RUNOFF FROM THE WASHOUT AREAS. ALL LIQUID CONCRETE WASTE SHALL BE CONTAINED IN A LEAK PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER, AND SHALL BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATION. THE EROSION CONTROL SUPERVISOR SHALL BE RESPONSIBLE FOR INFORMING CONCRETE CONTRACTORS AND SUBCONTRACTORS PRIOR TO ANY CONCRETE WORK BEING PERFORMED OF NPDES PERMIT REQUIREMENTS REGARDING CONCRETE WASHOUT OPERATIONS, AND PROVIDE CAREFUL OVERSIGHT DURING CONCRETE WORK TO ENSURE THERE IS NO IMPROPER DUMPING OF CONCRETE WASTE AND WASH WATER.

CONCRETE WASHOUT FACILITIES SHOULD BE PLACED IN A LOCATION THAT ALLOWS CONVENIENT ACCESS FOR CONCRETE TRUCKS WITH A SUFFICIENTLY STABLE PATH TO HANDLE ANTICIPATED LOADS, BUT THE FACILITIES SHALL NOT BE PLACED WITHIN 50 FEET OF STORMWATER CONVEYANCE SYSTEMS INCLUDING STORM DRAINS, OPEN DITCHES, OR WATERBODIES, OR WITHIN 200 FEET OF A PERMIT LISTED SPECIAL WATER. ALL CONCRETE WASHOUT LOCATIONS SHALL BE NOTED AS AN AMENDMENT TO THE SWPPP. A SIGN SHALL BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY CLEARLY IDENTIFYING DESIGNATED WASHOUT LOCATIONS.

THE NUMBER AND SIZE OF PREFABRICATED WASHOUT CONTAINERS OR ENGINEER APPROVED SITE BUILT CONTAINERS SHALL TAKE INTO ACCOUNT THE AMOUNT OF CONCRETE WASH ANTICIPATED ON THE SITE AS WELL AS POTENTIAL RAIN WATER TO ENSURE THAT ALL WASH WATER IS COLLECTED AND DISPOSED OF PROPERLY. TRUCK MOUNTED SELF CONTAINED WASHOUT SYSTEMS CAN ALSO BE CONSIDERED IF AVAILABLE ON THE TRUCKS DELIVERING CONCRETE TO THE SITE.

EXCESS PLASTIC CONCRETE WASTE FROM PUMPS, FORMS, AND CHUTES IS ALLOWED TO COME INTO CONTACT WITH THE GROUND AS LONG AS IT IS DISPOSED IN ACCORDANCE WITH MPCA DISPOSAL REGULATIONS ONCE IT HARDENS. HARDENED CONCRETE WASTE SHALL NOT BE BURIED ON SITE.

LIQUID WASTES GENERATED BY CONCRETE WASHOFF OPERATIONS FROM PAVERS, EQUIPMENT AND TOOLS, FROM SURFACE SEPARATION ACTIVITIES SUCH AS SAWING, CUTTING, CORING, GRINDING AND GROOVING OR FROM CONSTRUCTION OF EXPOSED AGGREGATE SURFACES SHALL BE DISPOSED OF ON-SITE (NOT ON A STREET SURFACE) BY IMPLEMENTING AVAILABLE BMP'S AS REQUIRED IN THE NPDES PERMIT.

AN OPEN SUBGRADE/SHOULDER SHALL BE CONSIDERED AN APPROVED WASHOFF AREA ONLY IF IT CONSISTS OF A LOW INFILTRATION AGGREGATE WITH THE ABILITY TO CONTAIN ALL OF THE RUNOFF WASTES THAT WILL BE PAVED OVER AS PART OF THE PROJECT. A CLOSED WATER TIGHT STREET SURFACE SHALL BE CONSIDERED AN APPROVED WASHOFF AREA IF APPROPRIATE ARE INSTALLED TO CONTAIN ALL RUNOFF WASTES, THE HARD SURFACE IS CLEANED OF DEPOSITS AND THE DEPOSITS ARE DISPOSED OF PROPERLY. A PROPERLY ISOLATED WORK AREA SHALL BE CONSIDERED AN APPROVED WASHOFF AREA IF IT CAN CAPTURE ALL WASHWATER AND CEMENTITIOUS SOLIDS TO BE DISPOSED OF PROPERLY.

THE CONTRACTOR SHALL NOTIFY THE STATE DUTY OFFICER OF ANY ACCIDENTAL CONCRETE WASHOUT DISCHARGE THAT MAKES CONTACT WITH SOIL OR WASHOUT/WASHOFF WATER THAT DISCHARGES TO A WATER OF THE STATE AS REQUIRED BY STATE LAW (MINN. R 7045.046B SUBP 6). IMMEDIATELY STOP FURTHER DISCHARGE, REMOVE DISCHARGE MATERIALS AND RESTORE THE SITE TO THE PRE-DISTURBANCE CONDITION.

INSPECTION AND MAINTENANCE:

THE EROSION CONTROL SUPERVISOR SHALL ROUTINELY INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. FOLLOWING AN INSPECTION WHICH OCCURS WITHIN 24 HOURS AFTER A RAINFALL EVENT, THE NEXT INSPECTION MUST BE CONDUCTED WITHIN SEVEN (7) DAYS AFTER THAT.

ALL INSPECTIONS AND MAINTENANCE CONDUCTED DURING CONSTRUCTION MUST BE RECORDED IN WRITING AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP IN ACCORDANCE WITH PART IIE OF THE NPDES PERMIT. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY SHALL INCLUDE:

1. DATE AND TIME OF INSPECTION
2. NAME OF PERSON CONDUCTING THE INSPECTION
3. FINDINGS OF INSPECTION, INCLUDING RECOMMENDATIONS FOR CORRECTIVE ACTION
4. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITY)
5. DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCHES IN 24 HOURS
6. RECORDS OF ANY DISCHARGES THAT OCCUR, INCLUDING LOCATION(S), COLOR, ODOR, APPEARANCE AND OTHER OBVIOUS INDICATORS OR POLLUTION, OBSERVED DISCHARGES SHALL BE PHOTOGRAPHED ALSO.
7. DOCUMENTATION OF CHANGES MADE TO THE SWPPP.

WHERE PARTS OF THE CONSTRUCTION SITE HAVE PERMANENT COVER, BUT WORK REMAINS ON OTHER PARTS OF THE SITE, INSPECTIONS OF THE AREAS WITH PERMANENT COVER MAY BE REDUCED TO ONCE PER MONTH. WHERE CONSTRUCTION SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AREAS AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, THE SITE MUST BE INSPECTED FOR A PERIOD OF TWELVE (12) MONTHS (THE INSPECTIONS MAY BE CEASED DURING FROZEN GROUND CONDITIONS.FOLLOWING THE TWELVE MONTHS OF PERMANENT COVER AND NO CONSTRUCTION ACTIVITY, INSPECTIONS MAY BE TERMINATED UNTIL CONSTRUCTION ACTIVITY IS ONCE AGAIN INITIATED OR SOONER IF NOTIFIED IN WRITING BY THE MPCA. WHERE WORK HAS BEEN WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE OR PRIOR TO RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.

ALL EROSION PREVENTION AND SEDIMENTATION CONTROL BMP'S MUST BE INSPECTED TO ENSURE INTEGRITY AND EFFECTIVENESS. ALL NONFUNCTIONAL BMP'S MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMP'S WITHIN 24 HOURS AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS UNLESS ANOTHER TIME FRAME IS SPECIFIED BELOW. THE CONTRACTOR SHALL INVESTIGATE AND COMPLY WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS:

1. ALL SILT FENCE MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ½ OF THE HEIGHT OF THE FENCE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
2. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES ½ THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
3. SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. THE CONTRACTOR SHALL REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGEWAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND REESTABLISH THE AREAS WHERE SEDIMENT REMOVED RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION SHALL TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. THE CONTRACTOR SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION SHALL TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK.
4. CONSTRUCTION SITE VEHICLE EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT SHALL BE REMOVED FROM ALL PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, SOONER.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMP'S AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S, FOR THE DURATION OF THE CONSTRUCTION WORK AT THE SITE. THE CONTRACTOR IS RESPONSIBLE UNTIL THE SITE HAS UNDERGONE FINAL STABILIZATION, AND A "NOTICE OF TERMINATION" HAS BEEN SUBMITTED TO THE MPCA.
6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT SHALL BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (I.E. FUGITIVE SEDIMENT IN STREET COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN EVENT AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREET).

ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITY IS REACHING THE INFILTRATION AREA AND THESE AREAS ARE PROTECTED FROM COMPACTION DUE TO CONSTRUCTIONS EQUIPMENT DRIVING ACROSS THE INFILTRATION AREA.

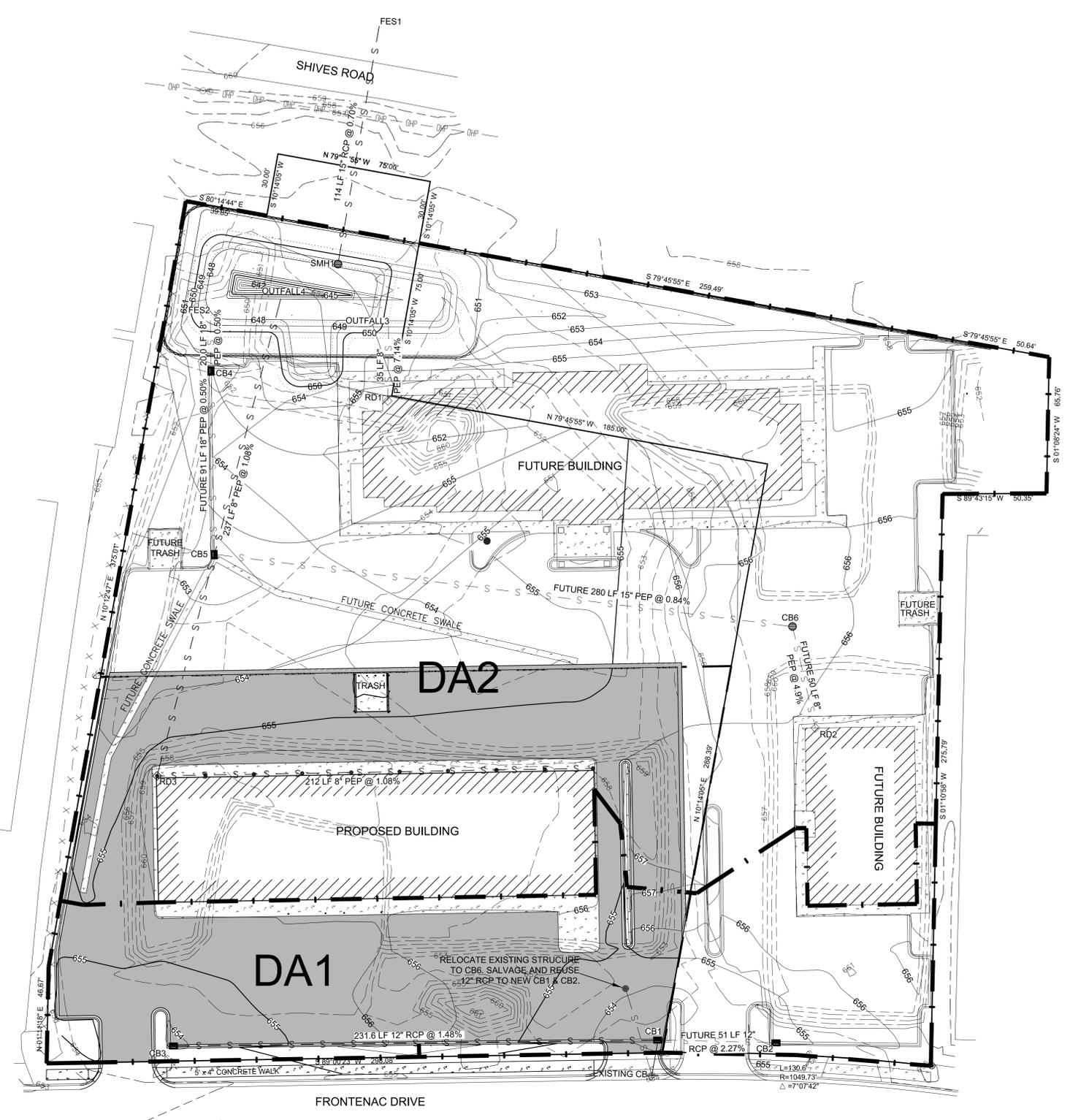
AMENDMENTS TO THE SWPPP:

THE CONTRACTOR SHALL AMEND THE SWPPP AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMP'S DESIGNED TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER:

1. THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS.
2. INSPECTIONS OR INVESTIGATIONS BY SITE OWNER OR OPERATORS, LOCAL, STATE OR FEDERAL OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS OR THAT THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES.
3. THE SWPPP IS NOT ACHIEVING THE GENERAL OBJECTIVE OF MINIMIZING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, OR THE SWPPP IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THIS PERMIT.
4. AT ANY TIME AFTER PERMIT COVERAGE IS EFFECTIVE, THE MPCA MAY DETERMINE THAT THE PROJECT'S STORMWATER DISCHARGES MAY CAUSE, HAVE REASONABLE POTENTIAL TO CAUSE, OR CONTRIBUTE TO NON-ATTAINMENT OF ANY APPLICABLE WATER QUALITY STANDARD, OR THAT THE SWPPP DOES NOT INCORPORATE THE APPLICABLE REQUIREMENTS IN PART III.A.9, DISCHARGES TO IMPAIRED WATERS AND TMDLS.

IMPLEMENTATION SCHEDULE & PHASING

1. INSTALL INLET PROTECTION AND EROSION CONTROL.
2. INSTALL ROCK CONSTRUCTION ENTRANCE AND CONSTRUCTION ENTRANCE FROM TUTTLE DRIVE.
3. INSTALL TEMPORARY INFILTRATION BASIN FOR WATER CAPTURED ON EAST SIDE OF CONSTRUCTION ENTRANCE.
3. INSTALL PUBLIC UTILITIES.
4. INSTALL CURB & GUTTER AND NON-WEAR BITUMINOUS PAVEMENT.
4. INSTALL EROSION CONTROL, BLANKET, SEEDED HYDROMULCH, OR BLOWN COMPOST SEED.
6. REMOVE INLET PROTECTION
7. ADD ADDITIONAL TEMPORARY BMP'S AS NECESSARY DURING CON



# LEGEND

These standard symbols will be found in the drawing.

- PROPOSED CONCRETE
- PROPOSED BITUMINOUS
- PROPOSED LANDSCAPE AREA
- PROPOSED DRAINAGE AREA BOUNDARY
- PROPOSED PHASE BOUNDARY
- PROPOSED STORM INLET AND PIPE

## STORM SEWER NOTES

- F.E.S. 1  
15" RCP INV.=647.50
- SMH 1  
STORM CONTROL STRUCTURE  
GRATE=651.10  
3" HOLE=650.80  
3" & 1" HOLE EL=648.30  
15" RCP INV.=648.30
- CB 1  
RIM=653.00  
INV=648.64
- CB 2  
RIM=653.80  
INV.=649.80
- CB 3  
656.08  
INV=652.08
- FES2  
INV.=648.13
- CB4  
RIM=652.75  
INV.=648.23
- CB 5  
RIM=652.75  
INV.=648.70
- CB 6  
RIM=655.00  
INV.=651.05
- FES3  
INV.=649.25
- RD 1  
EL=651.75  
VERIFY LOCATION WITH MECHANICAL PLANS
- RD 2  
EL=653.50  
VERIFY LOCATION WITH MECHANICAL PLANS
- RD 3  
EL=653.70  
F&I 10 ROOF DOWNSPOUT CONNECTIONS TO ADS DRAINAGE TILE-SEE DETAIL. VERIFY LOCATION WITH MECHANICAL PLANS
- FES4  
INV.=647.42  
WILL BE RELOCATED TO FES2 DURING FUTURE EXPANSION

## POND HYDROLOGIC DATA

**EXISTING CONDITION:**  
 DA = 3.61 ACRES Q2 = 2.79CFS  
 L = 500 FT Q10 = 6.73 CFS  
 S = 1.00% Q100 = 12.37 CFS  
 TC = 21.8  
 CN = 74

**PROPOSED INTERIM CONDITIONS:**  
 DA 1 (TO EXISTING CATCH BASIN) = 0.80 ACRES ( 0.50 ACRES IMPERVIOUS AND 0.30 ACRES PERVIOUS)  
 L = 300 FT Q2 = 1.89 CFS  
 S = 0.45% Q10 = 3.27 CFS  
 TC = 13.2MIN Q100 = 4.99 CFS  
 CN = 89

**DA 2 (TO POND) = 2.82 ACRES ( 0.73 ACRES IMPERVIOUS AND 2.09 ACRES PERVIOUS) RETENTION**  
 L = 400 FT Q2 (IN) = 3.16 CFS Q2 (OUT) = 0.13 CFS 96%  
 S = 1.00% Q10 (IN) = 6.95 CFS Q10 (OUT) = 0.17CFS 98%  
 TC = 17.2MIN Q100 (IN) = 12.19 CFS Q100 (OUT) = 2.61 CFS 79%  
 CN = 77  
 \* 100 - YEAR PEAK ELEVATION = 652.50'

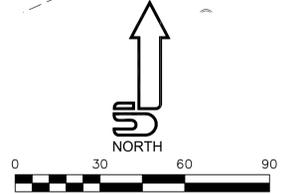
**PROPOSED FUTURE CONDITIONS (FULL BUILD OUT):**  
 DA 1 (TO EXISTING CATCH BASIN) = 0.69 ACRES ( 0.69 ACRES IMPERVIOUS AND 0.11 ACRES PERVIOUS)  
 L = 300 FT Q2 = 2.58 CFS  
 S = 0.45% Q10 = 4.06 CFS  
 TC = 10.1MIN Q100 = 5.90 CFS  
 CN = 95

**DA 2 (TO POND) = 2.82 ACRES ( 2.24 ACRES IMPERVIOUS AND 0.58 ACRES PERVIOUS) RETENTION**  
 L = 400 FT Q2 (IN) = 8.78 CFS Q2 (OUT) = 0.18 CFS 98%  
 S = 1.00% Q10 (IN) = 14.18 CFS Q10 (OUT) = 3.05 CFS 78%  
 TC = 9.4 MIN Q100 (IN) = 20.88 CFS Q100 (OUT) = 5.41 CFS 74%  
 CN = 93  
 \* 100 - YEAR PEAK ELEVATION = 652.50'

**TOTAL DEVELOPED FLOWS**  
 Q2 = 2.77 CFS  
 Q10 = 7.13 CFS  
 Q100 = 11.26 CFS

**DEAD STORAGE VOLUME = 3791 CF**  
**WATER QUALITY VOLUME = 13251 CF**  
**PERMANENT POOL ELEVATION = 648.3 FT**

CALL BEFORE YOU DIG  
 GOPHER STATE  
 ONE CALL  
 TWIN CITY AREA 651-454-0002  
 MN. TOLL FREE 1-800-252-1166



**BENCHMARK**  
 TOP NUT OF FIRE HYDRANT ON THE SOUTH SIDE OF FRONTENAC DRIVE, AT THE NORTHWEST CORNER OF THE ANYTIME FITNESS PARKING LOT.  
 ELEVATION= 659.81  
 NAVD 88 VERTICAL DATUM

**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
 1203 Main Street Red Wing, MN 55066  
 ph. 651.388.1558 fax 651.388.1559

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
 Steven P. Voigt, PE  
 DATE 3/3/16 REG. NO. 20034

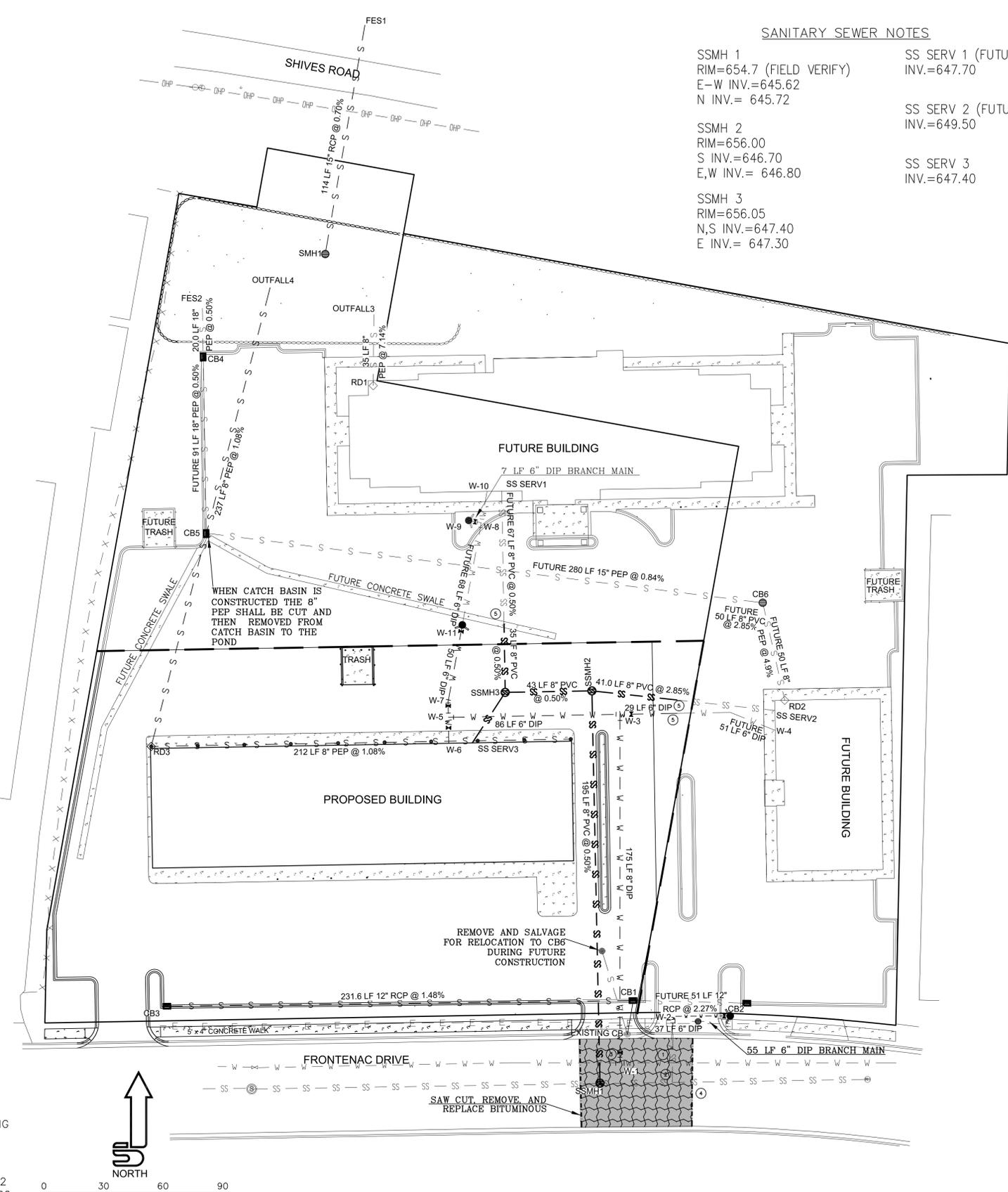
DESIGNED	SPV	REVISED	BY	DATE	LATEST REVISION: 4/04/2016
DRAWN	SPD	CHANGES FOR PHASED CONSTRUCTION	SPD	3/21/2016	Prepared For:
CHECKED	MSJ	CHANGES PER CITY COMMENTS	SPV	4/04/2016	BRICKL BROTHERS
					400 BRICKL ROAD
					PO BOX 125
					WEST SALEM, WI 54669
					PHONE:

**VEH PROPERTIES**  
**919 SHIVES ROAD**  
**WINONA, MINNESOTA**

## HYDROLOGY PLAN







**SANITARY SEWER NOTES**

- SSMH 1  
RIM=654.7 (FIELD VERIFY)  
E-W INV.=645.62  
N INV.= 645.72
- SSMH 2  
RIM=656.00  
S INV.=646.70  
E,W INV.= 646.80
- SSMH 3  
RIM=656.05  
N,S INV.=647.40  
E INV.= 647.30
- SS SERV 1 (FUTURE)  
INV.=647.70
- SS SERV 2 (FUTURE)  
INV.=649.50
- SS SERV 3  
INV.=647.40

**STORM SEWER NOTES**

- F.E.S. 1  
15" RCP INV.=647.50
- SMH 1  
STORM CONTROL STRUCTURE  
GRATE=651.10  
4 - 1" HOLE EL=648.30  
15" RCP INV.=648.30
- EXISTING CB  
RIM=653.84  
12" N INV=648.64  
15" S INV=648.29  
EXISTING GRATE MUST  
CHANGED TO CURBLESS  
GUTTER TYPE
- CB 1  
RIM=653.00  
INV=648.64  
EXISTING GRATE MUST  
CHANGED TO CURBLESS  
GUTTER TYPE
- CB 2 (FUTURE)  
RIM=653.80  
INV.=649.80
- CB 3  
656.08  
INV=652.08
- FES2 (FUTURE)  
INV.=648.13
- CB4 (FUTURE)  
RIM=652.75  
INV.=648.23
- CB 5 (FUTURE)  
RIM=652.75  
INV.=648.70
- CB 6 (FUTURE)  
RIM=655.00  
INV.=651.05
- OUTFALL3 (FUTURE)  
INV.=649.25
- RD 1 (FUTURE)  
EL=651.75  
VERIFY LOCATION WITH  
MECHANICAL PLANS
- RD 2 (FUTURE)  
EL=653.50  
VERIFY LOCATION WITH  
MECHANICAL PLANS
- RD 3  
EL=649.87  
F&I 10 ROOF  
DOWNSPOUT  
CONNECTIONS TO  
ADS DRAINAGE  
TILE-SEE DETAIL.  
VERIFY LOCATION WITH  
MECHANICAL PLANS
- OUTFALL4  
INV.=647.3  
(TO BE REMOVED AT  
CLEANOUT DURING  
FUTURE EXPANSION)

**WATER SERVICE NOTES**

- W-1  
F&I 8" WET TAP  
F&I 8" GATE VALVE
- W-2  
F&I 6" 90° BEND  
F&I 37 LF 6" DIP BRANCH MAIN  
INSTALL HYDRANT AND VALVE
- W-3  
F&I 6"x6"x8" TEE  
F&I 6" GATE VALVE
- W-4 (FUTURE)  
F&I CORPORATE VALVE  
CONNECT TO BUILDING  
VERIFY LOCATION WITH  
MECHANICAL PLANS  
F&I 22 1/2' BEND
- W-5  
F&I 6"x6"x6" TEE  
F&I 6" GATE VALVE
- W-6  
F&I CORPORATE VALVE  
CONNECT TO BUILDING  
VERIFY LOCATION WITH  
MECHANICAL PLANS
- W-7  
F&I 6"x11 1/4' BEND  
F&I 6" GATE VALVE
- W-8 (FUTURE)  
F&I 6"x6"x6" TEE
- W-9 (FUTURE)  
F&I 6" GATE VALVE  
F&I HYDRANT
- W-10 (FUTURE)  
F&I CORPORATE VALVE  
CONNECT TO BUILDING  
VERIFY LOCATION WITH  
MECHANICAL PLANS
- W-11  
F&I 6" GATE VALVE  
F&I HYDRANT  
(TO BE RELOCATED TO W-9  
DURING FUTURE EXPANSION)

**KEYNOTES:**

- 1 EXISTING 6" WATER FEED SERVICE TO BE USED TO CONNECT TO NEW HYDRANT & GATE VALVE PER CITY OF WINONA STANDARDS.
- 2 EXISTING SANITARY SERVICE TO BE REMOVED AND CAPPED TO RIGHT OF WAY PER CITY OF WINONA STANDARDS
- 3 A WET TAP WILL BE REQUIRED
- 4 THE DEVELOPER SHALL SUBMIT FOR APPROVAL A TRAFFIC CONTROL PLAN TO THE CITY OF WINONA PRIOR TO STREET CLOSURE FOR THE SANITARY AND WATER UTILITY PIPE CONNECTIONS.
- 5 END AND GAP PIPE 10 FEET PAST EDGE OF PAVEMENT

**UTILITY NOTES:**

- ALL WATER SERVICE PIPE SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS.
- ALL NEW HYDRANTS SHALL BE MB 67 PACER W/ 22" BARREL PER CITY STANDARD.
- 8" PVC SERVICE PIPE SHALL BE SDR-26.
- HIGH-DENSITY POLYETHYLENE (HDPE) STORM DRAINS MUST COMPLY WITH MINNESOTA RULES, PART 4715.0540.
  - A. PIPES 4" TO 10" IN SIZE MUST COMPLY WITH AASHTO M252.
  - C. ALL FITTINGS MUST COMPLY WITH ASTM D3212.
  - D. WATER-TIGHT JOINTS MUST BE USED AT ALL CONNECTIONS INCLUDING STRUCTURES.
- A MINIMUM HORIZONTAL SEPARATION OF 10 FEET MUST BE MAINTAINED BETWEEN WATER SERVICE AND ANY SEWER WHENEVER POSSIBLE. A MINIMUM VERTICAL SEPARATION OF 18 INCHES MUST BE MAINTAINED BETWEEN WATER SERVICE AND ANY SEWER.
- EXISTING CATCH BASIN AND CATCH BASIN 1 MUST HAVE GRATE REPLACED WITH CURBLESS GUTTER TYPE. WHEN FUTURE ENTRANCE IS BUILT AND THE TEMPORARY ENTRANCE IS REMOVED CURB STYLE GRATE MUST BE USED.

**LEGEND**

These standard symbols will be found in the drawing.

- BITUMINOUS REMOVAL FOR UTILITY CONNECTIONS
- PROPOSED CONCRETE
- PROPOSED LANDSCAPE AREA
- PROPOSED SANITARY MANHOLE AND LINE
- PROPOSED WATER MANHOLE, LINE, VALVE AND HYDRANT
- PROPOSED STORM CATCH BASIN, MANHOLE, ROOF DRAIN CONNECTION, DOWNSPOUT, AND LINE
- PROPOSED SAW-CUT
- PROPOSED PHASE BOUNDARY

**BENCHMARK**

TOP NUT OF FIRE HYDRANT ON THE SOUTH SIDE OF FRONTENAC DRIVE, AT THE NORTHWEST CORNER OF THE ANYTIME FITNESS PARKING LOT.  
ELEVATION= 659.81  
NAVD 88 VERTICAL DATUM

CALL BEFORE YOU DIG  
GOPHER STATE  
ONE CALL

TWIN CITY AREA 651-454-0002  
MIN. TOLL FREE 1-800-252-1166



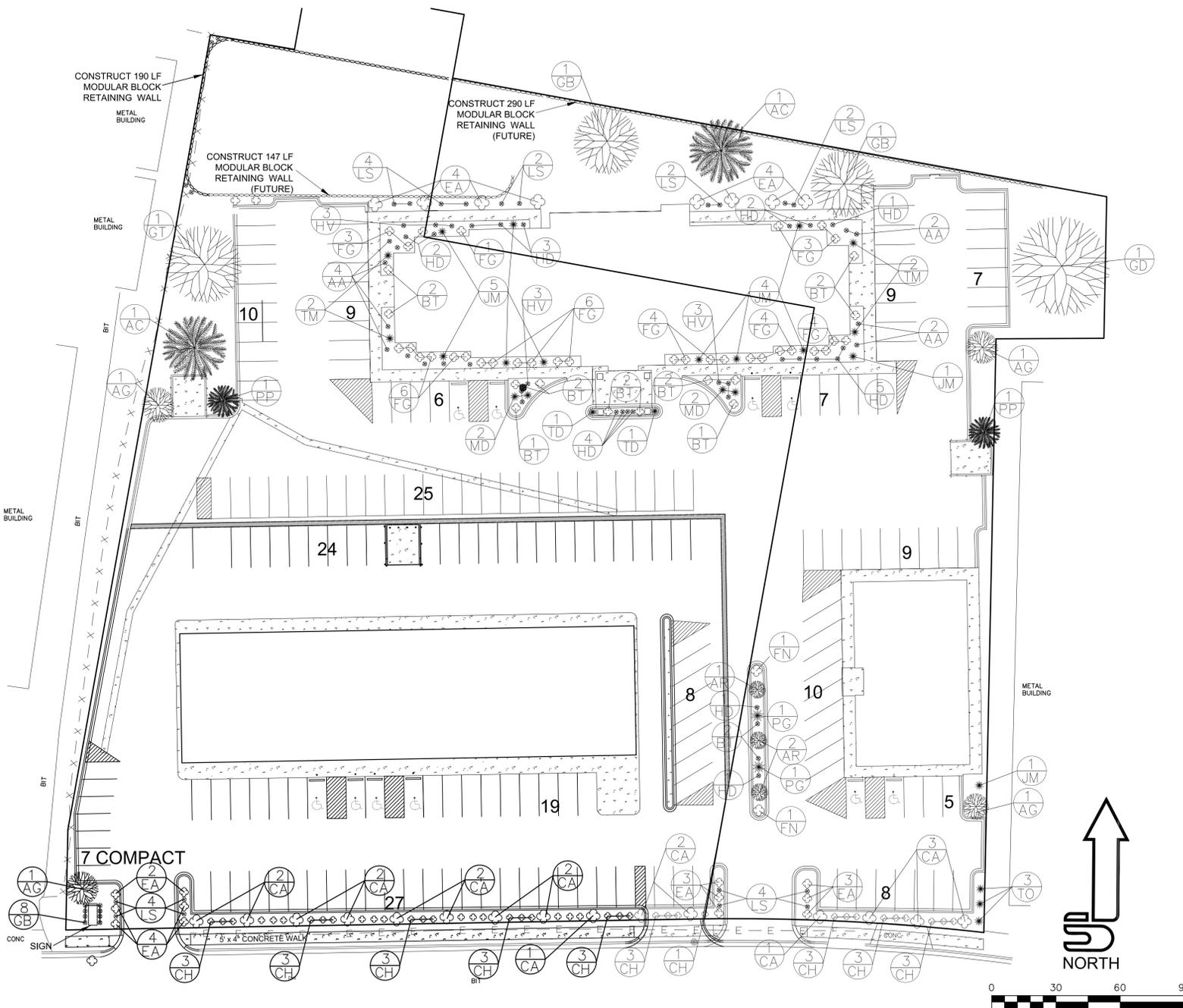
**Engineering, Surveying & Planning**  
**JOHNSON & SCOFIELD INC.**  
1203 Main Street Red Wing, MN 55066  
ph. 651.388.1558 fax 651.388.1559

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
Steven P. Voigt, PE  
DATE 3/3/16 REG. NO. 20034

REVISED	BY	DATE	LATEST REVISION: 4/04/2016
CHANGES FOR PHASED CONSTRUCTION	SPD	3/21/2016	Prepared For:
CHANGES PER CITY COMMENTS	SPV	4/04/2016	BRICKL BROTHERS
			400 BRICKL ROAD
			PO BOX 125
			WEST SALEM, WI 54669
			PHONE:

**VEH PROPERTIES**  
**919 SHIVES ROAD**  
**WINONA, MINNESOTA**

**UTILITY AND STREET REPAIR PLAN**  
SHEET 6 OF 10 SHEETS



**LANDSCAPE PLAN NOTES**

- ALL STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" SHALL BE USED AS THE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS.
- PLANT ESTABLISHMENT PERIOD (PEP) IS 12 MONTHS FROM THE TIME OF ACCEPTANCE. THE CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE DURING THIS TIME, AND SHALL PLACE REPLACE ALL DEAD MATERIAL DURING PEP.
- ALL PLANT MATERIAL SHALL BE BALLED AND BURLAPPED, OR CONTAINER GROWN ALL PLANT MATERIAL SHALL BE HEALTHY, FREE OF DISEASE AND PEST.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING ALL PLANT MATERIALS AND LAWN DURING PEP. THIS INCLUDES WATERING, MULCHING, SPRAYING, OR FERTILIZING ALL LAWN AND PLANT MATERIALS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THIS PLAN BEFORE PRICING THIS PLAN.
- ONLY THE DEVELOPER\ OWNER MAY SUBSTITUTE ANY SPECIES OR QUANTITIES SHOWN ON THIS PLAN.
- ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE DEVELOPER\ OWNER BEFORE, DURING, AND AFTER PLANTING.

*FUTURE TREE SCHEDULE*

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
3	AR	Acer rubrum	Red Rocket Maple	2 1/2" Caliper
3	AG	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2 1/2" Caliper
2	GB	Ginkgo biloba	Ginkgo	2 1/2" Caliper
1	GD	Gymnocladus dioica	Kentucky Coffeetree	2 1/2" Caliper
1	GT	Cleditsia triacanthos var. 'Inermis 'Impcole'	Imperial Honeylocust	2 1/2" Caliper
2	PP	Picea pungens	Colorado Spruce	2 1/2" Caliper
2	AC	Abies concolor	White Fir	2 1/2" Caliper

*FUTURE SHRUB AND PERENNIAL SCHEDULE*

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
4	AA	Astilbe x arendsii	Astilbe	#1
12	BT	Berberis thunbergii	Barberry	#3
4	CA	Cornus alba 'Bud's Yellow'	Bud' Yellow Dogwood	#3
13	CH	Cornus hessi 'Garden Glow'	Garden Glow Dogwood	#3
16	EA	Euonymus alatus 'Compactus'	Dwarf Burning Bush	#3
35	FG	Forsythia 'Gold Tide'	Gold Tide Forsythia	#1
2	FN	Forsythia 'northern Gold'	Northern Gold Forsythia	#3
19	HD	Hermercallis	Daylilly (use multiple colors)	#1
9	HV	Heuchera villosa	Coral Bells	#1
11	JM	Juniperus x media 'Daub's Frosted'	Daub's Frosted Juniper	#3
14	LS	Liatris spicata	Gayfeather	#1
4	MD	Microbiota decussata	Russian Cypress	#3
2	PG	Picea pungens 'Glaucu Globosa'	Globe Blue Spruce	#3
4	TM	Taxus x media 'citation'	Citation Yew	#3
2	TD	Taxus x media 'dark green'	Dark Green Yew	#3

**LEGEND**

These standard symbols will be found in the drawing.

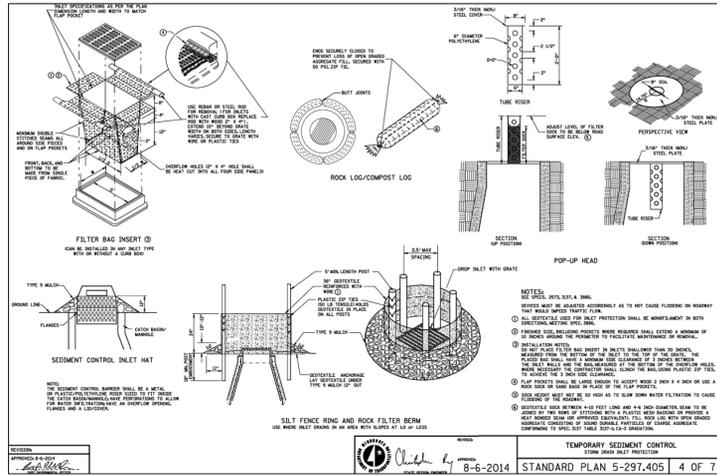
- PROPOSED CONIFEROUS TREE
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS SHRUB
- PROPOSED DECIDUOUS SHRUB
- PROPOSED PERENNIAL
- LANDSCAPE KEY

**TREE SCHEDULE**

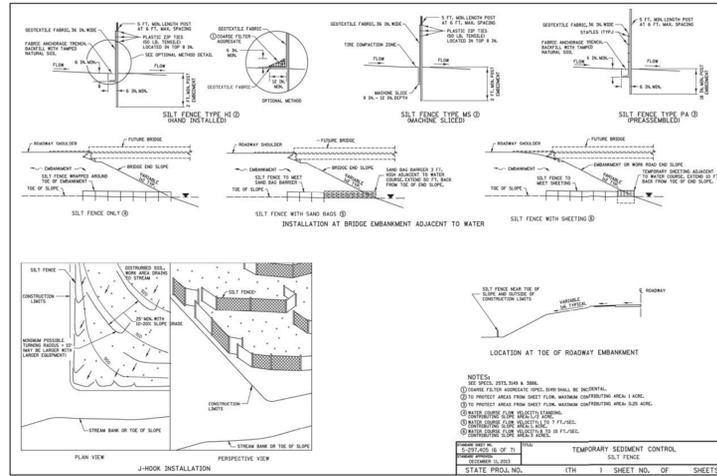
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
1	AG	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2 1/2" Caliper

**SHRUB AND PERENNIAL SCHEDULE**

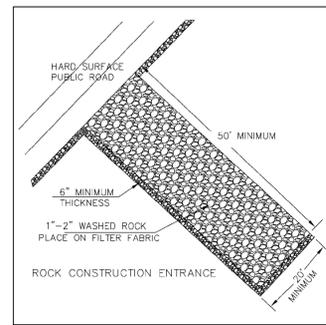
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
9	CA	Cornus alba 'Bud's Yellow'	Bud' Yellow Dogwood	#3
27	CH	Cornus hessi 'Garden Glow'	Garden Glow Dogwood	#3
4	EA	Euonymus alatus 'Compactus'	Dwarf Burning Bush	#3
4	LS	Liatris spicata	Gayfeather	#1
8	HD	Hermercallis	Daylilly (use multiple colors)	#1



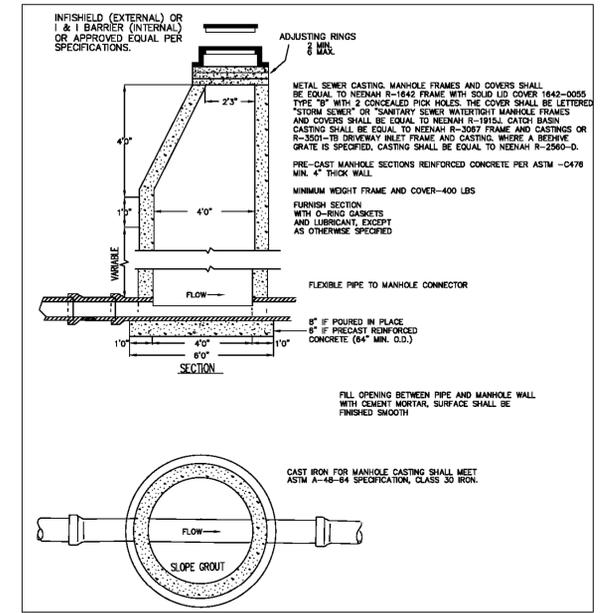
### CATCH BASIN EROSION CONTROL



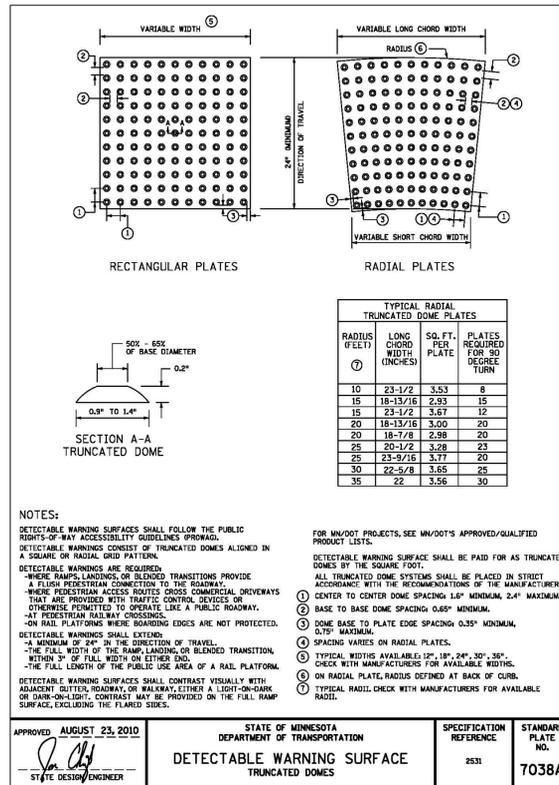
### SILT FENCE



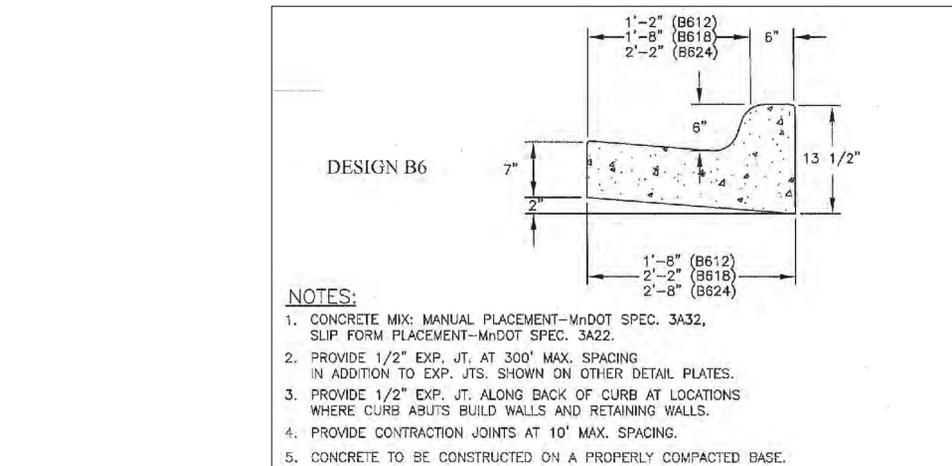
### CONSTRUCTION ENTRANCE



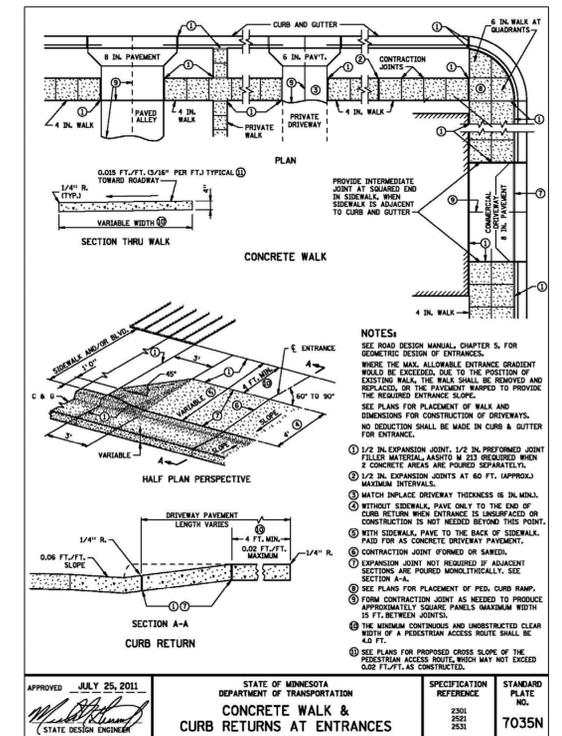
### SANITARY MANHOLE DETAIL



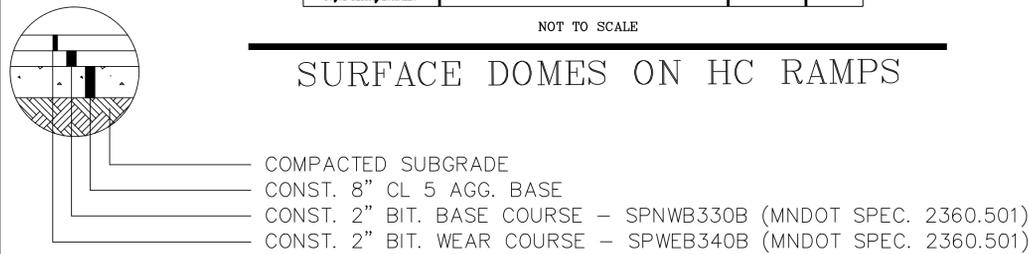
### SURFACE DOMES ON HC RAMPS



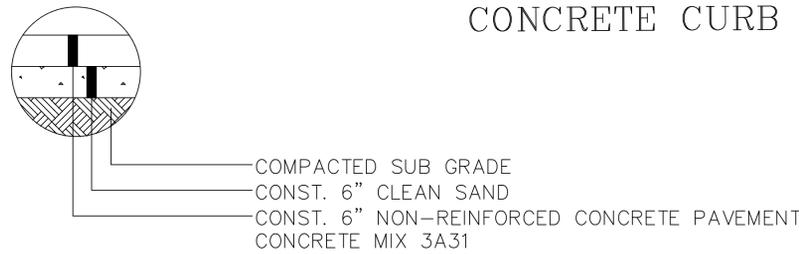
### CONCRETE CURB



### CONCRETE WALK & ENTRANCE

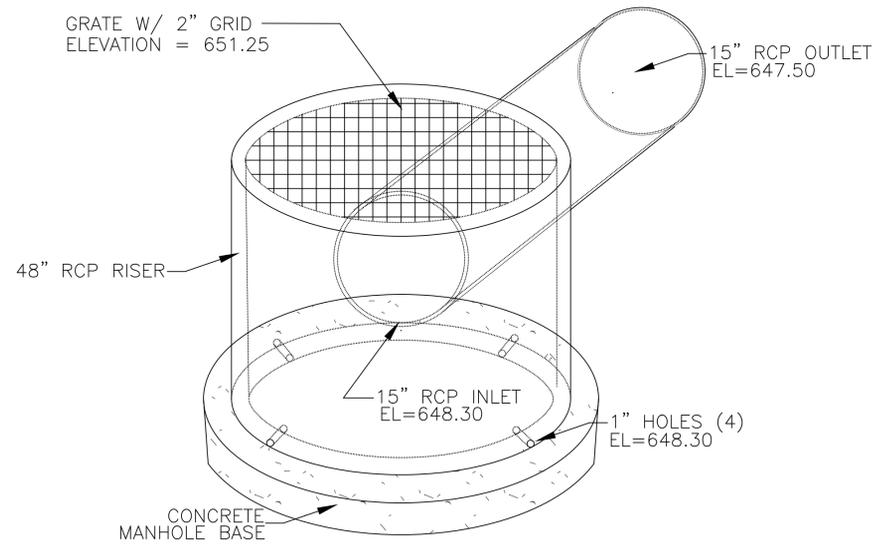


### BITUMINOUS PARKING SECTION



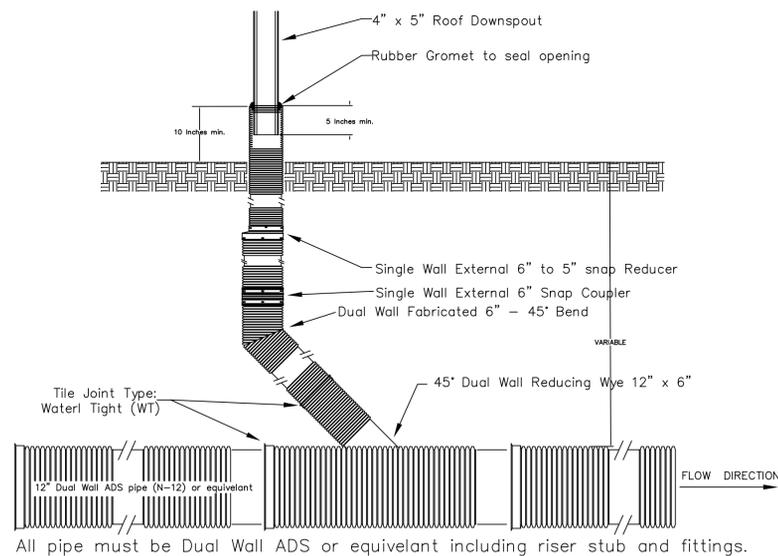
### CONCRETE TRASH PAD





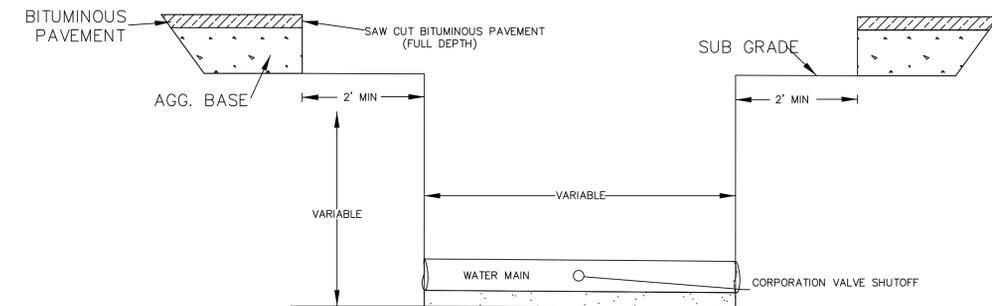
NOT TO SCALE

RETENTION POND CONTROL STRUCTURE



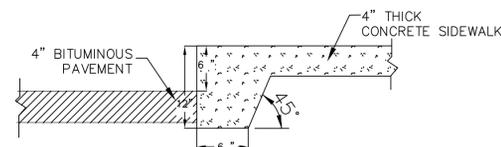
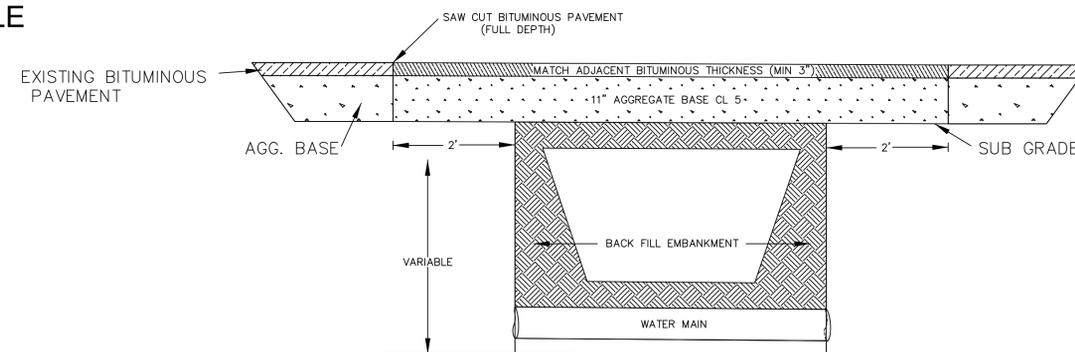
NOT TO SCALE

ROOF DOWNSPOUT CONNECTION TO ADS DRAINAGE TILE



TRENCH EXCAVATION AND SERVICE DISCONNECT DETAIL

TRENCH BITUMINOUS PATCH DETAIL

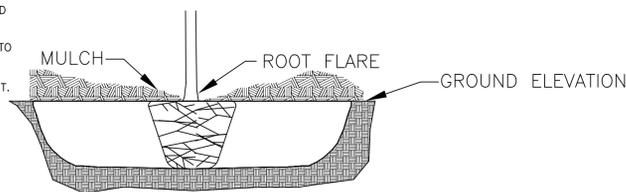


NOT TO SCALE

THICKENED EDGE SIDEWALK

THICKENED EDGE SIDEWALK SHALL BE INSTALLED ANYWHERE SIDEWALK ABUTS PAVED AREAS. EXPANSION JOINT IS REQUIRED IF SIDEWALK ABUTS CONCRETE PAVEMENT.

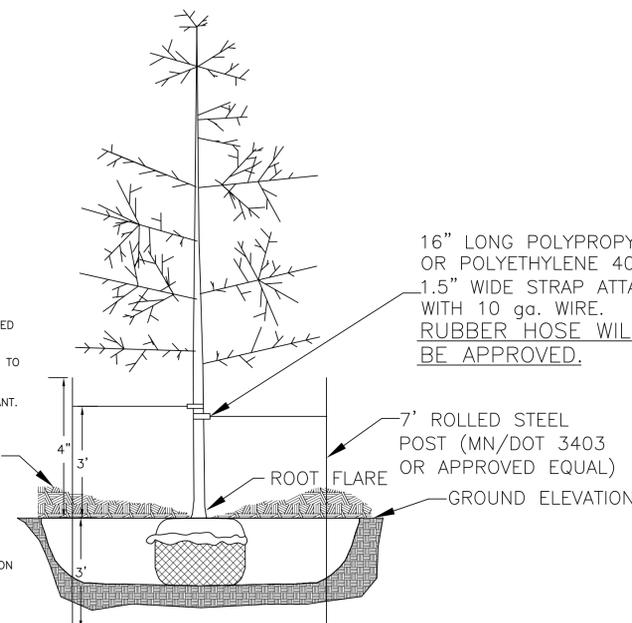
NOTES:  
SCARIFY BOTTOM AND SIDES OF THE HOLE.  
REMOVE CONTAINER AND SCORE OUTSIDE WALL OF SOIL MASS.  
SET PLANT ON UNDISTURBED NATIVE SOIL, OR COMPACTED BACKFILL SOIL.  
INSTALL PLANT SO THAT THE ROOT FLARE IS AT OR UP TO 2\"/>



NOT TO SCALE

CONTAINER STOCK PLANTING DETAIL

NOTES:  
SCARIFY BOTTOM AND SIDES OF THE HOLE.  
SET PLANT ON UNDISTURBED NATIVE SOIL, OR COMPACTED BACKFILL SOIL.  
INSTALL PLANT SO THAT THE ROOT FLARE IS AT OR UP TO 2\"/>



NOT TO SCALE

BALLED AND BURLAPPED TREE PLANTING AND STAKING DETAIL



NOT TO SCALE

VALLEY GUTTER DETAIL

- (c) Principles of Design. The site plan required by subsection (a) above shall incorporate the following general principles of design:
- (1) Landscaping. All sites shall be landscaped as approved by the Department of Community Development; existing trees shall be preserved where possible; surfaces denuded of vegetation shall be appropriately landscaped or surfaced to prevent soil erosion.
  - (2) Light glare from vehicles. When a parking lot adjoins a residential area, provisions shall be made to screen all vehicle lights to curtail direct illumination of the residential area.
  - (3) Drainage designs. Runoff water from parking lots, roofs and driveways shall not be allowed to cross sidewalks or to run onto private property that is not a part of the site unless easements have been obtained; surface runoff waters shall be directed into municipal facilities; where municipal facilities are not available, a drywell or drainage area owned or controlled by the owner or developer shall be provided; sanitary sewage shall be directed into municipal facilities where such facilities are available; where municipal facilities are not available and approval of the city engineer is secured, a septic tank shall be provided; retaining walls shall be constructed where necessary for land stabilization.
  - (4) Parking lots and loading areas. Parking lots shall be desired to avoid creating large open expanses of paving; parking lots and loading areas shall be designed to avoid the problem of vehicles backing onto streets, alleys and sidewalks; vehicular traffic flow to, from and within the land containing a parking lot shall be controlled by appropriate traffic-control signs and surface markings; adequate provision shall be made for vehicle egress from the land to the street and ingress to the land; provision shall be made for a safe and convenient circulation pattern within any parking lot consistent with vehicular and pedestrian safety; curb cut radii shall allow safe ingress and egress of vehicles from and to the proper lane of traffic on the street which they adjoin; existing curb cuts and curb cut radii shall be used only if they comply with the standards for proposed curb cuts and curb cut radii; vehicular bumper guards or wheel stops shall be provided to prevent encroachment of vehicles on sidewalks.
  - (5) Rubbish, garbage, storage and burning areas. Outside rubbish, garbage, storage and burning areas shall be permanently screened from view to a height of 6 feet and shall be constructed to prevent accidental dispersal of the materials contained therein.
  - (6) Parking lot lighting. A parking lot shall be lighted for vehicular and pedestrian safety. In residential areas, the maximum height above ground level of lights shall be 15 feet; maximum foot candles at ground level shall be 1; minimum foot candles at ground level shall be .5; flood and spotlights shall be shielded to prevent glare on adjoining lands. In

commercial or industrial areas the maximum height above ground level of lights shall be 30 feet; minimum foot candles at ground level shall be 2 in shopping centers, 1 in self-parking areas, 2 in attended or shelter parking areas and 1 in industrial areas.

- (7) General Site Lighting. Lights should be directed towards the structures or areas to be illuminated. Site lighting shall employ full cut-off style lights, lighting shields or fixtures as appropriate to keep glare on-site and minimize glare onto adjacent properties. The design and placement of lighting fixtures shall not have an adverse effect upon abutting properties.

Ord. No. 3893 3/13/2012