

**CITY OF HANOVER  
PLANNING COMMISSION MEETING  
MARCH 26, 2018  
AGENDA**

**CHAIR**  
**STAN KOLASA**

**COUNCIL LIAISON**  
**DOUG HAMMERSENG**

**BOARD MEMBERS**  
**JIM SCENDEL**  
**MICHAEL CHRISTENSON**  
**MICHELLE ARMSTRONG**  
**DEAN KUITUNEN**

- 1. Call to Order and Pledge of Allegiance: 7:00 p.m.**
- 2. Approval of Agenda**
- 3. Approval of Minutes from February 26, 2018, Regular Meeting**
- 4. Citizen's Forum**
- 5. Public Hearing**
- 6. Unfinished Business**
- 7. New Business**
  - a. Site Plan for 411 LaBeaux Avenue**
- 8. Reports and Announcements**
  - a. Planning Commission Reports**
  - b. Liaison Report**
  - c. Staff Reports**

**CITY OF HANOVER  
PLANNING COMMISSION MEETING  
FEBRUARY 26, 2018  
DRAFT MINUTES**

**Call to Order/Pledge of Allegiance**

Stan Kolasa called the February 26, 2018, Planning Commission Meeting to order at 7:04 pm. Members present were Stan Kolasa, Jim Schendel, Michelle Armstrong, Dean Kuitunen, and Mike Christenson. Also present Council Liaison Doug Hammerseng, City Planner Cindy Nash, and Administrative Assistant Amy Biren. Guest were present and signed in on attached sheets.

**Approval of Agenda**

**MOTION** by Schendel to approve the agenda with the change of moving New Business to proceed prior to the Citizen's Forum and removing a typo, seconded by Armstrong.

**Motion carried unanimously.**

**Approval of Minutes from the January 22, 2018 Regular Meeting**

**MOTION** by Christenson to approve the January 22, 2018, minutes with a correction of 2076 to 2017, seconded by Schendel.

**Motion carried unanimously.**

**New Business**

**a. H & R Construction Co.: 8<sup>th</sup> Street Industrial Park Site Plan**

Nash explained that the applicant was requesting site plan approval for outside storage on the parcel that is located at the end of 8<sup>th</sup> Street next to the marshy area. The end of this street is gravel and not improved to City standards. The Council has considered designating it as a private driveway as there are not plans to improve it at this time. An agreement with the applicant and the other two business would be signed stating that maintenance is not the City's responsibility. In the packet is included the site plan along with grading and stormwater plans.

Bob Ronning, H & R Construction Co.: As the applicant, he explained that he is in the business of supplying road work signs and guardrails to construction projects in the Twin Cities and have been renting space in the past. As that is no longer an option, he desires to have a site to store the signs and guardrails.

Armstrong asked about the intended fence and if it would look like the photo supplied in the packet. Ronning said yes, that is what was desired and the fence would be along the south side of the property along with a gate. The area would be secured. Armstrong asked if this was similar to the fence on the property to the east and Ronning replied in the affirmative. He continued that the signs are primarily new ones and that there would be some truck traffic when hauling the signs to where they are needed.

Hammerseng asked the height of the fence. Ronning said that it would six feet. Hammerseng asked if the items stored on the property would be visible above the fence line. Ronning said that the only time anything would be visible is when the trucks are parked on the property. The upper part of the trucks would be visible. The materials themselves would not be visible.

**MOTION** by Armstrong to recommend approval of the site plan as presented with the confirmation of the fence being as shown and to direct it to Council for the final approval, seconded by Kuitunen.

**Motion carried unanimously.**

**Citizen's Forum**

None

## **Public Hearing**

### **a. Requested Conditional Use Permit to Permit an Accessory Building in the Side Yard and to Exceed the Footprint of the Home**

Kolasa closed the Planning Commission meeting at 7:17 pm and opened the Public Hearing.

Nash explained that two conditional use permits were being requested, one for an accessory building in the side yard and a second for the size of the accessory buildings to exceed the footprint of the home. The property is located at 10677 Jonquil and is located in the Residential Agriculture zoning district. Per the ordinances, a conditional use permit is necessary for this to be allowed.

Armstrong asked whether the proposed accessory building meets the setback requirement from the septic system and if both primary and secondary septic areas had been identified. Nash replied that the proposed building did meet the setbacks and that both septic areas have been identified on the survey.

Kolasa closed the Public Hearing at 7:22 pm and reopened the Planning Commission meeting.

**MOTION** by Armstrong to recommend approval by the City Council as presented, seconded by Kuitunen.  
**Motion carried unanimously.**

### **b. Comprehensive Plan Amendment for the Hanover Cove Development and Review of Concept Plan**

Kolasa closed the Planning Commission meeting at 7:30 pm and opened the Public Hearing.

Nash explained that members will be looking at two separate items: an amendment to the Comprehensive Plan as well as a concept plan of a new development, Hanover Cove. The amendment requires a public hearing while the concept plan review does not, but it makes sense to combine them in order for the developer to hear feedback from residents in order to prepare a preliminary plat.

Nash reviewed the current zoning of the property surrounded by River Road, 8<sup>th</sup> Street, Meander Road, and Riverview Road, commonly known as the Duinick Pit. Currently it is zoned Single Family Residential and Light/General Industrial. For a development to go in, this would need to be re-guided. She went on to say that this area has been discussed during the Comprehensive Plan Review meetings and is consistent with the proposed future zoning. Because the future land use guidance has not been changed, an amendment is needed to re-guide the area for neighborhood residential. Nash also explained how the proposed development would have a greater density that is allowed by the Comprehensive Plan, but that the preliminary plat would be designed to meet density requirements.

Nash went on to explain the second item to be considered, the concept plan for Hanover Cove, proposed for the Duinick Pit, has a high level of view showing the suggested development. She explained that this is just a starting point and that the preliminary plat will have the exact details of how it will be developed. She went on to say that very few concept plans that are reviewed actually stay the same and are presented as the preliminary plat—the concept plan is fluid and changes with the process.

The concept plan was explained by Nash with her showing the entrances to the development, the four types of housing being proposed, and the existing pond being expanded for natural drainage and stormwater management.

Nash explained that there is a lot of the process left:

- The property needs to be rezoned.
- An Environmental Assessment Worksheet has already been ordered by the City Council and that will aid in assessing impacts on the natural environment, traffic, residents and the like.
- A preliminary plat has to be approved. This will give more definite details of the development and provide the guidelines that need to be followed.

- A final plat would be approved in order for construction to start.

She went on to review the staff comments as outlined in the memo to the Planning Commission and highlighted the following:

- The development needs to meet density requirements as it is higher than allowed.
- A Planned Unit Development (PUD) application may be needed. A PUD asks for things that vary from the ordinances, a change in design standards.
- Adjusting the site entrance that is closest to Riverview Road as it may cause a traffic conflict with the closeness of the two streets.
- Consider whether Duininck Road should have a connection in the southeast corner of the development.
- The homes along River Road should be provided with additional depth and buffer.
- Additional park space is not needed in this location and the City would like more information about the amenities being provided.

Allan Roessler, Paxmar Development, presented information about the proposed development, Hanover Cove, through a PowerPoint presentation. He spoke of what was planned for the property and showed types of housing, the lot sizes, and the request for changes in lot sizes, densities, and setbacks. The final details would be flushed out in the preliminary plat. He included advantages of the Paxmar proposal including an increase in taxable value, multiple price points, increased value of surrounding properties, and control by a master Home Owners Association (HOA).

Kuitunen asked about the discrepancy in density figures from Paxmar and what Nash had figured. Nash explained that Paxmar had more than likely used gross acreage of the site, while she had subtracted out the land that is undevelopable.

Armstrong said that the location of the row townhouses seems odd and out of place. A. Roessler explained that they were located in an area that had more traffic and the row townhouses would have one driveway going into a set of four, so there would be less entrances. Armstrong said that they visually may not be pleasing and asked if they would be willing to take those out and put in single family homes. A. Roessler said possibly.

Armstrong went on to ask about the existing trees on the property and whether or not they would be maintained. A. Roessler said that they would be willing to save as many trees as possible, but that many would need to be taken down. Armstrong then inquired about the park abutting Pheasant Run Park. A. Roessler said that they desired to make the current park larger for the community, and would remove the berm that is currently there and smooth the area out.

A. Roessler was asked by Armstrong if they would be willing to make a few lots larger in order to accommodate a Rambler style of housing. He replied that they are currently constructing rambles on a 75 foot lot in other developments with similar setbacks. He went on to say that even with a 10-15 foot increase in the lot, there is not an increase in value.

Armstrong continued, referencing the Bridges at Hanover homes that have a bigger house to meet the needs of residents that want that without having to have acreage to maintain. She stated that she understands the developer's perspective. A. Roessler stated that the demand is there for smaller lots. Armstrong asked about interest from any national builders. A. Roessler replied that it is early in the process, but there will be opportunities to connect with both national and local builders.

Armstrong asked about the orientation of the row townhouses along River Road. A. Roessler said that they would be perpendicular to the road and have one driveway going into the "row".

Hammerseng questioned whether there would be enough dirt onsite for the project or if more was to be hauled to the site. A. Roessler replied that the hope is there will be enough dirt to balance out the site so

that none was exported or imported. Much of the dirt will be taken from the berm and the northern side of the property.

Hammerseng asked how they determined the location of the different types of housing. A. Roessler said that they start with the traffic flow and then the desirability of the lots. Hammerseng asked why not have less housing types. A. Roessler replied that by having more housing types, it is opened up to more people. Hammerseng inquired about the length of time for the development to be completely full. A. Roessler said that under eight years is desirable.

Christenson asked about the amenities being planned for the development such as a pool. A. Roessler replied that currently it is about open spaces and trails; a pool has not been considered.

Hammerseng asked if the patio homes would be an area that would be good for senior housing. A. Roessler replied that this is exactly what this product is intended to be: for empty nesters, 55+, and seniors.

A. Roessler went on to explain that a home owner's association (HOA) would be the property manager and that the builder selected would choose the HOA manager. There would be a master HOA with sub-HOAs for the different types of housing. Nash interjected that the City would also review any proposed HOAs and have to approve them.

As the questions from the Planning Commission came to an end for the time being, Kolasa explained that he would call on the residents that had signed up to speak at the Public Hearing next. He would call them in order of sign up and then call on any other residents that would like to speak.

Dana Arrigo, 11344 Crow River Drive: comments sent via email and read by Biren: I would not be in favor of high density homes built in Hanover. This includes the single family and town home development being talked about tonight. My reasons for not wanting this development: 1. Hanover is only 5 square miles. It's first tier (sic) rural and I would like to see it remain (sic) it's (sic) small town feel. 2. I'm assuming the traffic would increase in front of the River Inn as people try to access Co19. On busy evenings this corner is already congested. I'm assuming this will get worse with more high density housing. 3. Having lower priced town homes could increase rental properties. I do not want to increase rental in Hanover. Again, I do not want this for our town.

Sara Williams, 364 River Road: She is concerned with the number of cars that would be leaving the area and the increased traffic through neighborhoods. She continued with concerns about the natural environment and wetlands of the area and how it will be handled. She sees the development as a way to maximize profits for the developer and the rest is an afterthought.

Robert Reichardt, 720 Meander Road: He stated that he lives next to Pheasant Run Park. He went on to say that more homes are needed as well as mixed use. Homes need to be by homes, not industrial parks. This is a good thing. He did express concern about the capacity of water and sewer systems with a new development. He responded to a prior comment stating that the natural beauty has been gone for a long time as it is a gravel pit.

Jason Leonard, 517 Overlook Circle: The proposal meets none of the guidelines in the Comprehensive Plan. He echoed concerns about the traffic and asked where are the people going to go. He moved here to be in a small town and likes being a pass-through city. He asked that the members please think of the families living around the property. He has lived in a townhouse, so he understands the difference between that and living in a single family home. It's about taxes and not the community.

Kevin Roberts, 11979 Riverview Road: He said that he doesn't mind if it's houses that go into the development. Lots were bigger in the past, but have grown smaller, so he would prefer to see larger lot sizes than proposed. He asked if any of the housing types would be subsidized or rented and what happens if the development cannot be filled. He also questioned where parking for the Hanover Harvest Festival would be if a development was approved.

Colleen Williams, 996 Mallard Street: She would like to keep Hanover smaller, keep it the Little City on the Crow. She believes that thoughtful development is needed and proposed making the property a “junior” Hanover Hills with fewer houses. Other communities are building on bigger lots. Williams went on to give feedback about park amenities, requesting a splash pad. She suggested single family homes on the south side of 8<sup>th</sup> Street instead of the patio homes so as to reflect the homes on the north side. She also expressed concern about the traffic, using her street as an example as the development became fully developed, suggesting curvier streets or speed bumps.

Amy Sefton, 11551 Lynwood Court: Sefton expressed concerns about the high density being proposed, especially the patio homes; the effect on home values; and the increased amount of traffic. She asked how the increased traffic from the development would impact the traffic on the bike trails. She also questioned the home values expressed in the presentation as they do not seem to match the comparable properties they were shown when possibly listing their home for sale.

Karla Schendel, 443 River Road: She explained that she has lived here since 1978. She also is concerned about the traffic, both now and in the future. She also expressed concern about the safety of the children at the elementary school and the difficulties experienced in getting them to school. She went on to say she avoids parts of River Road due to the increase traffic and will go out of her way. K. Schendel thinks that the homes should be single family homes. Developments need to think of the future and what is good for everyone.

Claudia Pingree, 11711 Riverview Road: Pingree said that she has lived her for 30 years and has been looking forward to something like this with patio or town homes. After hearing the presentation, she does not believe that this would be good for Hanover and that it would be allowed in any other part of the city. She believes that something less crowded is needed, and something for seniors. Pingree shared that she and the seniors had talked with Duinick in the past about this, including some sort of senior center. She believes that this needs to be thought about and perhaps wait for something in the future.

Debbie Krajsa, 11534 Lynwood Court: She said that she supports a strong community and development, one that betters the community and does not deter from it. A wholistic perspective is needed and the entire city needs to be looked at and the developments within it. A concern she has is that future infrastructure improvements are not billed to the existing residents, as well as how a new development would impact the Crow River. Traffic is a concern and cited a traffic equation involving vehicle trips per day would increase the trips from that development’s entrances as 3400 per day. She sees traffic issues already in the surrounding intersections at River Road, 8<sup>th</sup> Street, Mallard Street, 15<sup>th</sup> Street and CSAH 19. Krajsa wondered why 5<sup>th</sup> Street was not extended into the development. She asked that the Board members understand the market demands and the impact on the schools. She suggested looking to other cities where this developer has worked and see what the results have been. She asked the developer how will they support the community and better the community and how the city would support the developer through waived fees, etc. She questioned the governance of the HOA and the expressed how critical the design of the homes would be. Will the development be phased in and what portion would be allocated for low income and rental housing.

James Steinbrueck, 11557 Lynwood Court: He gave a history of he and his family living in other cities and that moving to Hanover was the best as it was a small town. He reiterated that Hanover was not part of the Cities where houses are expensive and close together. He mentioned that the current owner of the property does not reside in Minnesota, but Crete, IL, which is 600 miles away. He mentioned that there is just sand and gravel, no dirt, located in the Duinick Pit. Steinbrueck expressed concern over the impact on the water and sewer capabilities, the class size at Hanover Elementary, and what will happen to the infrastructure. He mentioned a study done for the City of Buffalo last year that looked at the infrastructure in the future of that city. He suggested putting another school in the southern portion of the property as had been proposed in the past.

Cullen Jackson, 11620 Lynwood Avenue: He expressed concern about the rush hour traffic coming through Hanover daily and how it would be further impacted with a new development. He stated that Hanover

Elementary does a fantastic job at educating the students and has won awards for it, but worries about the increased class size being detrimental to that characteristic. He believes that people's property values will go down, and while he respects the work the developer has done, he would vote against it.

Bill Bauer, 11989 Riverview Road: He said that he grew up in the area and went to Hanover Elementary School as a child. He recently moved to Hanover with his family and now his kids go to the same school as he did and have some of the same teachers. Concern was expressed about the increase in student numbers and then the increase in additional schools with the funding supported by tax payers. Along with increased residents, the increased traffic would also have serious impacts. He believes the developer needs to look at the whole picture when developing the area.

Mike Dumas, 776 Meander Road: He said that he enjoys living where he does and would be okay with some development such as single family homes on half acre lots. He doesn't want to see smaller lots where enjoying the outdoors may be impacted.

Stephanie Gleason, 11875 Riverview Road: She is excited about a new development but being transparent and asking the residents for input is critical. She sees a new development as greatly impacting the school district. There are many pieces that need to be looked at. Gleason asked what type of amenities in the parks are being planned and what the residents would like to see should be considered. She would like Hanover to keep its small town feel with a well-thought out planned development.

Kolasa closed the Public Hearing at 8:51 pm and reopened the Planning Commission meeting. He spoke to the audience, stating that this was the time for Board members to discuss what has been said and he would acknowledge audience members at appropriate times.

Nash indicated that the members could start with either of the two items—the amendment or the concept plan. Kuitunen said that they should start with the amendment to the Comprehensive Plan first. Nash said that what the applicant is asking for is consistent with what has been discussed at the Review meetings and the proposed update to the future land use map.

Kuitunen asked if there was any reason why the southern part of the property had been zoned Industrial rather than Residential. Nash replied there was no reason. Kolasa acknowledged Steinbrueck to speak: He said there is no difference in the land that would suit one zoning district over another.

**MOTION** by Kuitunen to recommend the amendment to the Comprehensive Plan be forwarded to the City Council for approval, seconded by Armstrong.

**Motion carried unanimously.**

Nash moved on to the review of the concept plan for Hanover Cove. She said that approval of a concept plan is a non-binding agreement for both the developer and the City. A PUD is not being considered tonight and will accompany the preliminary plat. The Board can give guidance and suggestions for it.

Kent Roessler, Paxmar, asked Kolasa if he would be permitted to speak in response to some of the comments by the residents. Kolasa agreed. K. Roessler addressed the following:

- As the developer, his name is on the development and the residents can be assured that the development will be done right.
- He wouldn't want to short the community in any way and is presenting a concept plan that reflects that. He wants to work with the residents to bring a high quality development to the city.
- The concerns voiced are the same as ours. The EAW has been hired out to professionals and all of the concerns will be addressed. The EAW will provide some of those answers.
- Every community that Paxmar has proceeded with development has had similar concerns.
- He spoke to the wide range of home values in the area and said that the ones in the proposed development would range from about \$190,000 to \$500,000.
- The concept plan is well thought out and yes, the density is higher.

- He said that building on a half acre lot would not be as cost effective as building on a smaller lot.
- The property is a bowl and will remain that way due to the mining done in it.
- The land will become developed and we are a quality company to do it. If not, another developer may have different plans that are not as beneficial.

Kolasa said that the Board will review the comments made and asked Nash if they will all be covered by the EAW. Nash replied that the majority of the concerns will be addressed, but that the impact on the schools is not covered by the EAW. Once the EAW is completed, the public has a lengthy time period to review it, as does the Board.

Kolasa asked if the concept plan needed to go forward to Council. Nash replied yes, that by doing the concept plan review allows concerns and comments to be voiced and then allows the developer a chance to address them in the preliminary plat. This also allows for issues to be resolved prior to construction.

Armstrong stated there is a need for different types of housing in Hanover and in the nearby cities. She doesn't see a need for the row houses and that they do not fit in with the other styles of housing in Hanover. She added that there is a high demand for the patio/villa type of housing. It makes a lot of sense with the different types of housing. She does see the entrance closest to Riverview Road as a concern.

Kuitunen agreed that row houses do not seem to be consistent with other types of housing in Hanover.

Armstrong said that the twin homes fulfill a housing need for people that want a smaller house and little maintenance, but at the same time do not want to be sandwiched in a row. End units usually are a premium unit in town homes.

Pingree asked Kolasa to be able to address the Board. Kolasa agreed. Pingree said that type of housing is needed here and would also meet transitional housing needs such as adult children living near parents.

Armstrong said that when first looking at the number of units proposed, it seems like a lot. However, it seems like the developer is open to listening to the residents.

Kolasa asked if the developer needs to see this go forward to Council. Nash replied yes. Planning Commission would be recommend approval of a general idea or concept that is non-binding. Concept plans rarely look like the preliminary plat.

Kolasa reaffirmed that residents will be given more opportunities to review plans and speak. Nash said that this is just the beginning of the process. She explained that this concept plan could go forward or they could present a different plan, but she doesn't think the comments would be any different with a new concept plan.

Kolasa allowed audience members to ask further questions or make comment.

K. Roessler asked that the concept plan be forwarded to Council with the concerns highlighted and then they will be to address them.

Jackson said that he is not opposed to development, but is afraid this will lower his property value.

Williams said that she feels that the concerns were not heard.

Lee Dalchow, 11969 Riverview Road: He asked if the EAW would take into consideration other developments going on or being proposed. Nash answered that an EAW is site specific and would not include other future developments. Dalchow went on to say that he doesn't know why they couldn't include the vacant land like the Ruter Farm. He went on to voice concerns about the traffic and how he has to go to the light to access CSAH 19.

Nash explained that during a Comprehensive Plan Review, which Hanover is in the process of doing, the City Engineer will work on the transportation aspect of planning for the future. This looks ahead 20-40

years to see what needs may be predicted. An EAW looks at the needs to be addressed at the present time or a few years into the future.

K. Schendel said that traveling north on CR 123 and trying to access CSAH 19 is extremely difficult and will become more so with another development. This needs to be addressed.

Heather Sandberg, 11578 Riverview Road: The last proposed development for this land was supposed to be a school. Riverview Road is narrow and dangerous already. She wonders who is going to pay for the changes to the infrastructure.

Armstrong asked if the points outlined on the memo will be shared with Council. Nash replied that they will be forwarded along with comments from tonight.

Christenson said that he feels it is too dense and too much housing. He would encourage single family housing following the current ordinances. He does not believe patio homes belong in Hanover.

Kuitunen said that patio homes are needed, but not the row houses. He also believes that the area needs to be managed correctly.

Armstrong agreed saying that three of the housing types work, but not the row houses. There is a demand for these types of houses if people want to stay in Hanover through the various phases of life. This needs to be forwarded to Council.

Christenson said he could live with the patio homes, but not the town homes.

**MOTION** by Armstrong to recommend bringing the concept plan for Hanover Cove to Council along with the staff recommendations, residents' concerns, and Planning Commission comments about the row houses, seconded by Kuitunen.

**Motion carried unanimously.**

Kolasa ordered a five minute break before continuing.

## **Unfinished Business**

### **a. Amendments to the Zoning Ordinance Related to Mining and Extraction**

Nash reviewed that the outstanding issue was regarding the ratings of the roads. Justin Messner, City Engineer, had a prior commitment, but discussed the issue of road ratings with Nash. Messner said that MnDot considers all roads to be rated at 10 tons unless it is posted at a lower rating, therefore, if the road is not posted, it is considered to be a 10 ton road.

Hammerseng asked that if a new mine was in operation, it is the responsibility of the owner to improve the road to a 10 ton standard. Nash replied yes, unless it is posted at a lower rating. Nash handed out a guide outlining Minnesota Weight Laws and Limitations.

Nash acknowledges that the concern is there during the spring with road restrictions on. If it comes to a point where that is inhibiting a mining operation, then money would need to be spent to improve a lesser rated road to the 10 ton standard or to change hauling loads.

Schendel questioned the roads in the Industrial Park are 9 ton roads, but now are considered 10 ton roads. Nash stated according to Messner, if the road is not posted, it is considered a 10 ton road.

Hammerseng inquired about the site and sound of the mining operations, particularly the recycling aspect, and how that would be handled. Nash said that the view shed requirements that are written into the ordinance will take care of any issues regarding visibility of the operation. The view shed analysis will allow mines to be considered individually and ensure that visibility requirements are met. In another area of the ordinance, sound is covered, including the impulse noise such as a back up beeper. She added that there are also environmental standards that need to be met. Hammerseng questioned Gary Fehn about the

time and length of the recycling process. Fehn said that it is a short-term project during a short time period and not consistently done throughout the year. Nash also included the fact that the recycling process will be part of the site plan and if it is done in an area not approved in the Interim Use Permit (IUP), that would constitute a violation of the IUP.

Kuitunen asked if anything had been found on the agreement between St. Michael and Hanover regarding 15<sup>th</sup> Street. Biren responded that no agreement could be found and that the city administrator had also been consulted about its existence. The only items found regarding it were the original IUP and updated IUP for the Mahler Pit.

Bauer asked about how the new laws regarding silica dust are related to recycling concrete as it is a by-product. Nash responded that she has been working with other cities that have silica sand mine and that monitoring was completed. Test samples prior to mining operations were taken and then during the mining operations. It was found that the farm fields and gravel roads were producing background readings in the air monitors. The Mine Safety and Health Administration (MSHA) requires certain precautions for workers. When proper buffers and best management practices were in place, the issue of the dust leaving the site was minimal.

Fehn added that there are also regulations that need to be followed when recycling the concrete.

Hammerseng asked if monitoring is a concern and who is responsible for it. Nash said there are many components that are monitored by other agencies, but cities can be involved in the monitoring process. MSHA is good about protecting the workers, but is not as concerned with outside of the operation.

**MOTION** by Kuitunen to recommend Ordinance 2018-XX Amending Chapter 10 Pertaining to Mineral Extraction be sent forth to the City Council for final approval, seconded by Armstrong.

**Motion carried unanimously.**

#### **Reports and Announcements:**

**Staff:** Nash said that an EAW has been ordered for the next phase of Crow River Heights West Third Addition. There also may be a commercial development application at the next meeting for the corner of Fifth Street and CSAH 19. The spring is looking to be a busy one for the Planning Commission.

Schendel asked if a traffic study or information be made available to residents, including what nearby cities are in the process of doing. He referenced when the CSAH 19 bridge was closed for five hours due to a traffic accident, and how difficult that made traveling in the area. Kuitunen said that traffic studies tend to be expensive. Nash agreed and stated that often a traffic study will not provide the information desired or be of value.

Nash also spoke of setting up a project page on the City website to provide information to residents and Planning Commission members.

#### **Adjournment**

**MOTION** by Armstrong to adjourn, seconded by Christenson.

**Motion carried unanimously.**

Meeting adjourned at 10:17 pm.

#### **ATTEST:**

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Amy L. Biren  
Administrative Assistant

# Collaborative Planning, LLC

## Memorandum

Date: March 26, 2018  
To: Planning Commission  
From: Cindy Nash, City Planner  
RE: Hanover Dental – Site Plan

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An application has been received for a site plan to utilize an existing vacant lot for a dental office. A copy of the site plan and architectural plans are included in your packets.

The property is zoned B-2 Highway Commercial. The property is on the corner of CR 19 and 5<sup>th</sup> Street and consists of approximately 2.43 acres.



The exterior of the structure is subject to the requirements for exterior materials contained within the Zoning Ordinance. The exterior consists primarily of fiber cement board (HardiePlank and HardiePanel), which is being used on the exterior walls as a lap siding, and in the gables as a vertical siding. A concrete masonry feature is included adjacent to the primary entrance to the building. Finally, the columns supporting the entrance to the building consist of a decorative metal latticework design that drew its inspiration from the Hanover Bridge.

The proposed building consists of 2,335 square feet. The plans identify space on the southern side of the building (indicated with a dashed line) for a future addition of 491 square feet. The applicant is requesting approval of the site plan to include approval for the future addition so that a separate application is not required in the future.

Parking requirements are six (6) spaces for each dentist practicing in the building. Initially, there would only be one dentist on the site. In the future, an associate may be added. There is sufficient parking for two dentists, with a total of twelve (12) parking spaces. This is sufficient to meet the ordinance requirements today for the 2,335 square foot building. Parking will need to be re-reviewed in the future concurrent with a building permit for the addition to ensure parking still meets the ordinance requirements in effect at that time.

The City Engineer has reviewed the plans and has provided the attached comment letter of items to be addressed.

### **Recommendation**

It is recommended that the site plan be approved subject to the following conditions:

1. Comments included in the letter from the City Engineer dated March 20, 2018 shall be addressed.
2. Development of the site must be in substantial conformance with the site plans prepared by Meyer-Rohlin Land Services dated February 13, 2018, and the architectural plans prepared by Sjoquist Architects, Inc. dated March 9, 2018, as modified by addressing the comments in the City Engineers Memo and the conditions contained in the approval resolution.
3. Small utility service (electric, phone, etc.) to the property shall be underground.
4. A future addition consisting of not greater than 500 square feet may be added to the south side of the building without completing site plan review at the Planning Commission and City Council. Staff is authorized to review the site plan when/if submitted. Changes to the existing site plan may be required for the building addition if ordinance requirements have changed at the time the addition is proposed. A building permit is required for the addition.
5. No lighting plan has been submitted. Staff is authorized to review and approve the lighting plan, if one is submitted in the future.
6. No signage has been submitted. Staff is authorized to review and approve signage for the building.



## **Memorandum**

**To:** *Cindy Nash – Hanover City Planner*

**From:** *Justin Messner, PE – Hanover City Engineer*

**Cc:** *Brian Hagen – Hanover City Administrator*

**Date:** *March 20, 2017*

**Re:** *Hanover Dental Plan Review*  
*WSB Project No. 011692*

---

As requested, we have reviewed the Hanover Dental plan for compliance with the City of Hanover (City) City Code, Standard Construction Specifications and the MPCA Stormwater Engineering Guidelines. The following documents were submitted and reviewed:

- 18005HanoverDental Storm Calcs 031518; submitted by Schultz Engineering
- CVT Geotechnical Report for Hanover Dental Clinic; dated 01/25/18 and submitted by Chosen Valley Testing
- Hanover Dental-Arch Plans; dated 030918 and submitted by Schultz Engineering
- Hanover Dental-PLANNING COMMISSION set; dated 030918 and submitted by Schultz Engineering

### **Stormwater Management**

The applicant falls under the ‘Large Site Projects’ description due to the proposed construction of a commercial dental clinic and is required to meet rate control and water quality City requirements. The applicant has demonstrated that water quality requirements are being met but it is unclear at this time if rate control requirements are being met. The following comments should be addressed moving forward:

#### **General**

1. An operations and maintenance plan for the stormwater infiltration basin should be provided with future submittals.

#### **Planset**

1. The proposed culvert under the driveway will not fit under the pavement with the proposed grading. The proposed culvert and/or the proposed grading should be reconfigured to make sure the pipe will run under the driveway.
2. The low floor elevation needs to be at least 3 feet above the high water level of the infiltration basin per the City Code. Applicant should update the design to meet this requirement.

3. The use of MPCA Biofiltration Mix C or D instead of MPCA Biofiltration Mix B is recommended for the bottom and sides of the infiltration basin for better phosphorus removal.
4. Add a north arrow to planset.

#### HydroCAD Modeling

1. Submit an existing conditions model to determine if rate control requirements are being met.
2. Model the entire project site for both existing conditions and proposed conditions. For proposed conditions include nodes for area routed to culvert under driveway and area routed offsite.
3. Include the 1-year storm event and the 100-year, 10-hour snowmelt event with future models per the City Code.

#### Construction Plans

##### *General Comments*

1. All engineering notes, details and specifications should reference and utilize the most recent City General Specifications and Standard Detail Plates for Street and Utility Construction (see attached)

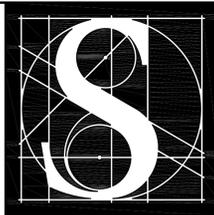
##### *Grading Plan Comments*

2. Install a commercial concrete driveway apron per City standard detail STR-08.
3. Extend the curb coming from Labeaux Avenue through the proposed driveway and tie in to the existing bituminous curb on the east side.
4. Install a 2'x3' catch basin in the curb line just to the west of the driveway apron per City standard detail STO-01.
5. Connect the 2'x3' catch basin to a 24" high beehive structure where the current FES inlet is located on the west side of the driveway is proposed.
6. Regrade the swale on the west side of the parking area to achieve the minimum grade (2%) requirements to the proposed beehive structure.
7. The areas up against the south and west sides of the building do not meet minimum grade requirements. Provide any additional gutters or drains being proposed to direct drainage.
8. The drainage swale from the garbage enclosure around the south side of the building does not meet minimum grade requirements.
9. The drainage at the southeast corner of the driveway area does not meet minimum grade requirements.
10. The drainage just north of the driveway/parking area is shown flowing to and along the west edge of the driveway and then transitions to flow across the driveway to the raingarden along the east edge. Provide how would this transition would work.

*Utility Comments*

11. The service connection to the watermain should occur at a point on the south side of 5<sup>th</sup> Street.
12. There is an existing 6" water service stub with shut off valve located on the south side of 5<sup>th</sup> Street in front of Parcel 2 to the east that can also be utilized.
13. Any other connection should be made per City standard detail WAT-04. Copper pipe should be used from the connection at the watermain to the curb stop.
14. The proposed storm manhole should be shifted to the east so as to not impact the existing sanitary sewer main.
15. Remove the word 'manhole' from the label for the existing invert elevation of the sanitary sewer service stub at the main on sheet C-102 which seems to imply a structure exists at the junction.

# NEW BUILDING FOR HANOVER DENTAL



**Sjoquist Architects, Inc**  
2800 University Avenue SE, Suite 100  
Minneapolis, Minnesota 55414  
612.379.9233 Fax 612.379.9263  
http://www.sjoquist.com

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the state of

MINNESOTA  
*C. L. Robertson*  
Signature

C. L. ROBERTSON / 222115  
Architect / Registration

2018.03.09  
Date

ACK Drawn CLR Checked

Revisions

1728  
Project Number

NEW BUILDING  
HANOVER  
DENTAL

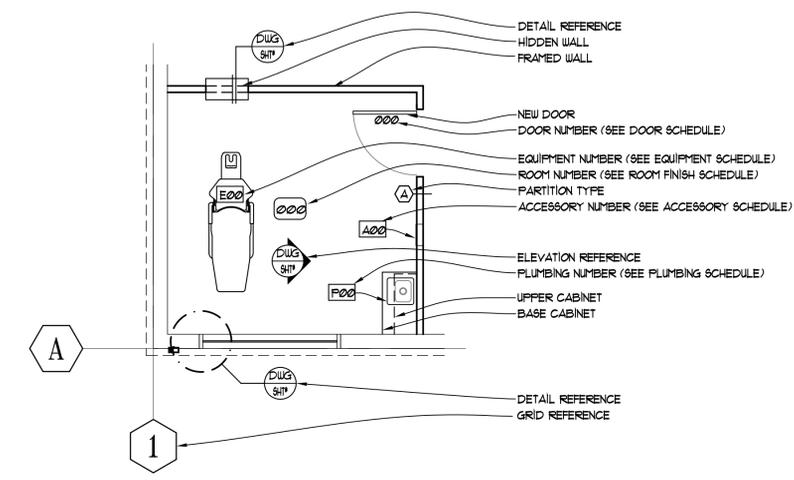
411 LABEAUX AVENUE NE

HANOVER  
MINNESOTA

TITLE SHEET

G-001

## KEY TO SYMBOLS



## NOTE:

ALL CONTRACTORS / SUBCONTRACTORS ARE RESPONSIBLE FOR BEING FAMILIAR WITH THE INFORMATION ON ALL SHEETS IN THIS SET OF DRAWINGS AND SPECIFICATIONS. ANY DISCREPANCIES BETWEEN INFORMATION FOUND IN DIFFERENT PLACES WITHIN THESE DRAWINGS AND SPECIFICATIONS ARE TO BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY, AND WORK BASED ON THAT INFORMATION IS TO NOT BE PERFORMED UNTIL THE ARCHITECT HAS CLARIFIED THE ISSUE.

## GENERAL NOTES:

- DO NOT SCALE THESE DRAWINGS. IF THERE IS A DIMENSIONAL QUESTION, CONTACT THE ARCHITECT FOR CLARIFICATION.
- ALL DESIGN / BUILD DRAWINGS ARE TO BE REVIEWED WITH THE ARCHITECT PRIOR TO BEING SUBMITTED FOR PERMIT.
- ALL SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH OTHER SUBCONTRACTORS TO ENSURE NO DELAYS.
- ALL WORK FROM ALL TRADES SHALL CONFORM TO THE LATEST PROVISIONS OF ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES AND REGULATIONS.

## OWNER

HANOVER DENTAL PLLC  
1192 BICE AVENUE NW  
BUFFALO, MINNESOTA 55313  
763.226.1319

## ARCHITECT

SJOQUIST ARCHITECTS INC (CARL ROBERTSON)  
2800 UNIVERSITY AVENUE SE, SUITE 100  
MINNEAPOLIS, MINNESOTA 55414  
612.379.9233 / 612.379.9263 (FAX)  
crobertson@sjoquist.com

## STRUCTURAL ENGINEER

A M STRUCTURAL ENGINEERING (DAVE WAGNER)  
112 EAST MAPLE STREET  
RIVER FALLS, WISCONSIN 54022  
715.426.4930 / 715.426.4899 (FAX)  
davew@amstructural.net

## CIVIL ENGINEER

SCHULTZ ENGINEERING (BRIAN SCHULTZ)  
18 SOUTH RIVERSIDE AVENUE SUITE 230  
SARTELL, MINNESOTA 56311  
320.339.0669 / 866.633.1830 (FAX)  
schultzeng@live.com

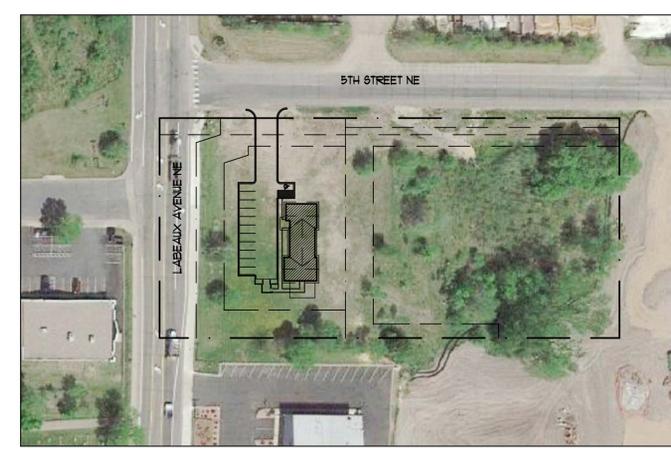
## CONTRACTOR

KARKELA CONSTRUCTION (ROGER SWAGGER)  
4806 PARK GLEN ROAD  
ST LOUIS PARK, MINNESOTA 55416  
952.922.5512 / 952.922.5906 (FAX)  
roger@karkela.com

## BUILDING STATISTICS - 2012 IBC

GROUP / DIVISION	B
DESCRIPTION OF OCCUPANCY	DENTAL
TYPE OF CONSTRUCTION	V B - NON-SPRINKLERED
AREA	2,335 SQ FT
BUILDING HEIGHT	18', 1 STORY
TOTAL OCCUPANTS	
DENTAL @ 100 SF/OCC	$\frac{2,335 \text{ SQ FT}}{100 \text{ SF/OCC}} = 23$

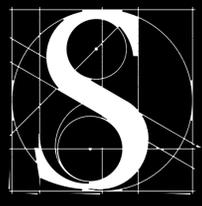
## LOCATION MAP: NOT TO SCALE



## SHEET INDEX

G-001	TITLE SHEET	A-201	EXTERIOR ELEVATIONS / FINISH SCHEDULE / ROOF PLAN
G-002	EXIT PLAN	A-211	INTERIOR ELEVATIONS
C-100.1	GENERAL NOTES & SPECIFICATIONS	A-212	INTERIOR ELEVATIONS
C-100.2	STANDARD DETAILS	A-301	BUILDING SECTIONS
C-101.1	GRADING PLAN	A-302	BUILDING SECTIONS
C-101.2	SWPPP - NOTES	A-411	ENLARGED FLOOR PLANS
C-101.3	SWPPP - PLAN VIEW	A-431	WALL SECTIONS
C-102	UTILITY & PAVING PLAN	A-432	WALL SECTIONS
L-101	LANDSCAPE PLAN / PLANT SCHEDULE	A-501	EXTERIOR DETAILS
S-100	FOOTING FOUNDATION PLAN	A-502	EXTERIOR DETAILS
S-120	ROOF FRAMING PLAN	A-503	EXTERIOR DETAILS
S-501	STRUCTURAL NOTES & DETAILS	A-504	EXTERIOR DETAILS
AS101	ARCHITECTURAL SITE PLAN	A-505	EXTERIOR DETAILS
AS102	ARCHITECTURAL SITE PLAN	A-506	EXTERIOR DETAILS
A-101	FLOOR PLAN / ROOM FINISH SCHEDULE	A-511	INTERIOR DETAILS
A-101a	FLOOR PLAN TAGS & ELEVATION TAGS	A-601	WALL & PARTITION TYPES
A-111	REFLECTED CEILING PLAN	A-602	DOORS, FRAMES, AND HARDWARE
A-131	FINISH PLAN / FINISH SCHEDULE	A-603	ACCESSORIES/ PLUMBING & EQUIPMENT SCHEDULES
A-151	POWER PLAN	A-701	SPECIFICATIONS
A-161	LIGHTING PLAN	A-702	SPECIFICATIONS





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[www.schultzengineeringdesign.com](http://www.schultzengineeringdesign.com)

*I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of the state of Minnesota*

**BRIAN J. SCHULTZ, PE**

<b>03/09/2018</b>	<b>43129</b>
<b>DATE</b>	<b>LICENSE NO.</b>

Revisions

**1728**  
Sjoquist Project Number  
**18005**  
Schultz Eng. Project Number

**NEW BUILDING**  
**HANOVER**  
**DENTAL**

**HANOVER**  
**MINNESOTA**

**GENERAL NOTES & SPECIFICATIONS**

**C-100.1**

18005Specs.dwg

#### STANDARDS AND REFERENCES

Materials and construction methods specified in the plans reference the Minnesota Department of Transportation (MNDOT) Standard Specifications for Construction. The Contractor shall obtain a current copy of MNDOT's Standard Specifications for Construction and review the specification sections applicable to the plans.

It is mandatory that the Contractor be knowledgeable of the applicable MNDOT specification sections during construction. No additional compensation will be paid to the Contractor for additional work due to unfamiliarity with the applicable specification sections.

Contractor shall refer to the geotechnical report for additional requirements and recommendations.

#### EARTHWORK NOTES

##### PROTECTION

- The Contractor shall maintain all benchmarks, monuments and other reference points. If any are disturbed or destroyed, they shall be replaced at the Contractor's expense.
- The Contractor shall contact the Engineer immediately if any unknown functioning underground utilities are discovered during the course of the project, which may interfere with construction. The Contractor shall wait for instructions before proceeding.
- The Contractor shall be responsible for any damage to functioning underground or overhead utility lines. Damaged utilities shall be repaired immediately and service restored at no additional cost to the Owner.
- The Contractor shall provide barricades, shoring and other safety measures required by OSHA.
- The Contractor shall protect all adjacent existing facilities from damage, including, but not limited to settlement due to excavations, erosion, etc.. The Contractor shall be responsible for the repair of such damages.

##### PROJECT CONDITIONS

- The Contractor shall become familiar with the project site, and compare actual conditions in the field with those shown on the project drawings. The Contractor shall contact the Engineer immediately if any inconsistencies are found between the existing conditions and the project drawings.
- No extra compensation will be allowed due to unusual conditions which could have reasonably been determined or anticipated by examination of the project site and project drawings.

##### PLAN GRADES

- Elevations shown on the project drawings are finished grade elevations, unless noted otherwise. Elevations not specifically indicated shall be determined by interpolation of uniform slope between spot elevations and/or contours, or between such points and existing elevations. Adequate slope shall be constructed to provide positive drainage away from structures.
- If inconsistencies exist on the plans between contours and spot elevations, the spot elevations shall govern.

##### TOPSOIL

- Adequate imported and/or stockpiled salvageable topsoil shall be utilized for this project.
- Topsoil shall be free of clay lumps, roots, brush, large stones, and debris, and shall have a minimum organic content of 5 percent.
- Remove topsoil to its entire depth from areas, which are to be disturbed by new construction work. Existing lawn areas, which are not in the proposed construction area(s) shall remain in place. The Contractor shall field verify topsoil depths between any soil borings, and remove to greater depths than indicated in the soils report if such conditions are encountered. Salvaged topsoil shall be maintained in stockpiles.
- Stockpiled topsoil shall only be used for finish grading of new lawn areas. Excess topsoil shall be removed from the site by the Contractor.
- Protect all existing lawn areas, plantings, and other landscaping to remain in place. Any damaged areas shall be replaced at the Contractor's expense.

##### UNFORESEEN OBSTACLES

- The Engineer shall be contacted immediately if any unforeseen major obstacles are encountered during excavation, such as abandoned wells, abandoned or functioning utilities, subsurface streams or rock, etc., which would add significant expense to the Contractor.
- The Contractor shall still be responsible for completing all work required for this project where encountered conditions may be reasonably determined from a soils/geotechnical report and review of the project site and contract documents.

##### DEWATERING

- Surface drainage shall be provided during construction in a manner so as not to create a nuisance to adjacent areas.
- All excavations shall be free of water during construction within the excavations. Dewatering shall be accomplished by pumping or trenching, and shall be conducted regardless of the cause, source, or nature of the water.
- Berms, cofferdams, or piling shall be provided as necessary to protect excavations.
- Excavations shall be sloped to drain, and necessary pumps, hoses and other equipment shall be provided to keep excavation free of water.
- All temporary equipment used for dewatering shall be removed from the site when no longer necessary.

##### FILLING AND GRADING

- Rough grading of all areas within the construction limits, including adjacent transition areas shall be reasonably smooth and compacted. The rough graded subgrade surface generally shall not be more than 6 inches above or below the established subgrade elevations. All ditches, swales, and gutters shall be graded to drain adequately. The subgrade shall be evenly sloped to provide drainage away from building walls in all directions at a minimum slope of 1%. The Contractor shall provide rounded transitions at top and bottom of banks and other breaks in grade.
- Fill and backfill materials shall be inorganic soils free of roots, rocks, boulders, and debris.
- Bedding material or granular backfill larger than 2" in its largest dimension shall not be allowed within 2 feet of new underground pipes. Material larger than 3" in its largest dimension shall not be allowed within 1 foot of subgrade elevation.
- Imported compacted fill material shall have a maximum of 12 percent passing the #200 sieve, by weight. The proposed fill material shall be tested by an independent testing lab for suitability as compacted fill for this project. The Contractor shall pay for the testing services and provide a copy of the test results to the Engineer.
- The Contractor shall fill and grade as necessary to bring surface to required elevations, and provide all materials necessary, whether obtained on or off the project site.
- The Contractor shall place compacted material in uniform horizontal lifts not exceeding 8" in depth for clay soils, and 12" in depth for sandy soils, and compact as required to achieve specified density.
- Compaction shall be obtained with the use of vibratory rollers or rammers. During compaction, fill material shall contain moisture content, as necessary, for the required compaction as indicated by an independent testing laboratory. The moisture shall be uniform throughout each lift. If the material is too dry, water shall be added with approved equipment and methods, which will not wash out fine material. If the material is too wet, it shall be dried by harrowing, diskng, blading, or other approved methods recommended by the independent testing laboratory.
- Areas designated for pavement in excavated (cut) areas shall be scarified to a depth of 1 foot. The Contractor shall bring the subgrade material to optimum moisture content as indicated by the independent testing laboratory, and compact the subgrade to the specified density listed below for soils underneath pavements.
- The Contractor shall not place fill material when either the fill material, or the material on which it is to be placed, is frozen. Any soft or yielding areas appearing in the fill resulting from rain, or any other reason whatsoever shall be scarified, removed, recompacted and/or otherwise rectified to the satisfaction of the Engineer before any new fill is placed.

##### COMPACTION TESTS

- Utility Trench Backfill: The Contractor's independent soils technician and approved testing laboratory shall perform in-place density and moisture tests at random depths in trench backfill at 100 foot intervals, or fraction thereof. Compaction of trenches shall be a minimum of 95% of the maximum dry density (as determined by the independent testing laboratory) in lawn areas, and at depths greater than 3 feet below areas designated for pavement. Compaction of trenches at depths within 3 feet of paved surfaces shall be a minimum of 100% of the maximum dry density.
- Compacted Fill Under Pavements: Compaction tests shall not be required beneath new pavements. Adequate compaction of materials under pavements shall be determined by test rolling the subgrade, and checking for excessive rutting. Test rolling shall be performed as per MNDOT Spec. 211.1.
- Areas exhibiting a failed compaction test shall be re-compactd and re-m tested to the satisfaction of the Engineer prior to acceptance of the project.
- Copies of all compaction testing and test roll observation reports shall be provided to the Engineer.

5) Optimum moisture-density relationship will be determined by testing laboratory in accordance with ASTM D698 and maximum density determination made by Method D of ASTM D698 unless otherwise noted in these specifications.

##### SUBGRADE PREPARATION

- Finished subgrade elevations shall be as follows:
  - Bituminous pavement: 7" below finish grade.
  - Concrete pavement/apron: 12" below finish grade.
  - Concrete sidewalk: 8" below finish grade (plus thickened edge).
  - Lawn areas: 4" below finish grade.
  - Planting areas: See Landscaping Plans/Details
- The tolerance for areas to be paved shall not exceed 0.15 feet above or below plan subgrade.
- The Contractor shall protect newly graded areas from erosion, Settlement or washing that occurs prior to acceptance of the Work shall be repaired and grades re-established.

##### DISPOSAL OF EXCESS WASTE MATERIALS

- The Contractor shall remove excess excavated material, debris, and waste materials, from the Owner's property and legally dispose of it in accordance with all governing codes.

##### SPREADING TOPSOIL AND FINISH GRADING

- Scarify subgrade to depth of 3" prior to placing topsoil. Spread topsoil evenly over complete subgrade as follows:
  - Lawn Areas on Private Property: Spread 4" lightly compacted layer of topsoil.
  - Lawn Areas in Public Right-of-way: Per City requirements
  - Planting Areas: See Landscape Plan/Details
- Finish grade accurately within 0.15 feet of finish grades shown on the project drawings, less the thickness of any sod where it is to be installed. Slope of grades away from buildings to provide positive drainage.
- Prepare topsoil suitable to receive seed and/or sod. Grading of areas designated for topsoil shall be reasonably smooth and even, and in accordance with MNDOT Spec. 2105.3G and 2574.3A4. All debris and stones exceeding 3" in diameter shall be removed from the soil surface of these areas prior to seeding. Areas compacted by vehicles or storage of materials shall be plowed, disked and harrowed to match texture of other finish graded areas.
- Grass seed shall be in accordance with MNDOT Spec. 3876, seed mix No. 25-131, applied at the rate of 220 pounds per acre or as indicated on the landscape plans. Mulch shall be applied and dischordered to all seeded areas and shall meet the requirements of MNDOT Spec. 3882, Type 3 or as otherwise indicated by the Engineer.

##### UTILITY NOTES

##### STANDARD SPECIFICATIONS

- The following standard specifications shall apply to this project:
  - Minnesota Plumbing Code - MN Rules Chapter 4714 (MN Dept. of Labor and Industry-MNDU)
  - Uniform Plumbing Code, latest edition (UPC)
  - "What you need to know about utility service connections in the 2015 Minnesota Plumbing Code" [http://www.dl.mn.gov/CCLD/PDF/ppe\\_usc.pdf](http://www.dl.mn.gov/CCLD/PDF/ppe_usc.pdf)
  - City Engineers Association of Minnesota (CEAM) Standard Specifications
  - American Society for Testing Materials (ASTM)
  - American National Standards Institute (ANSI)
  - American Water Works Association (AWWA)
  - Minnesota Department of Transportation "Standard Specifications for Construction" (MN/DDOT)
- The Contractor shall comply with all local ordinances and codes
- Certifications of all utility materials, as well as shop drawings, shall be submitted to the Engineer for review

##### POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS - SANITARY

- Smooth walled polyvinyl chloride pipe and fittings shall consist of SDR 26 or SDR 35 pipe, unless noted otherwise, and meet the requirements of ASTM D3034 and Section 2621.2A5 of the CEAM Standard Specifications
- All pipe and fittings shall be SDR 35 for depths of up to 20 feet, and SDR 26 for depths exceeding 20.
- Pipe joints shall meet the requirements of Section 2621.3A3 of the CEAM Standard Specifications.
- DUCTILE IRON (DI) PIPE AND FITTINGS - WATER
  - Ductile iron pipe and fittings shall meet the requirements of Table 604.1 of the UPC, and Section 2611.2A1 of the CEAM Standard Specifications
  - Pipe joints shall meet the requirements of Section 605.5 of the UPC, and Section 2611.3B of the CEAM Standard Specifications. Stainless steel fasteners shall be prohibited.
  - 6" pipe shall be Class 52. 8" and larger pipe shall be Class 50.

##### POLYVINYL CHLORIDE (C900 PVC) PIPE AND FITTINGS - WATER

- Polyvinyl chloride pressure pipe and fittings shall meet the requirements of Table 604.1 of the UPC, and Section 2611.2A3 of the CEAM Standard Specifications
- Pipe joints shall meet the requirements of Section 605.4 of the UPC, and Section 2611.3B of the CEAM Standard Specifications.

##### GATE VALVES - WATER

- Gate valves shall meet the requirements of Sections 2611.2C and 2611.3D of the CEAM Standard Specifications

##### HYDRANTS - WATER

- Hydrants shall meet the requirements of Sections 2611.2B and 2611.3D of the CEAM Standard Specifications
- Hydrants shall be Waterous WB67, or approved equal

##### BLOCKING AND ANCHORING - WATER

- Water main blocking and anchoring shall meet the requirements of Section 2611.3A4 of the CEAM Standard Specifications
- Provide thrust reaction blocking consisting of concrete with a minimum 28 day compressive strength of 2000 psi.
- Place between undisturbed ground and the fitting to be anchored. Place thrust blocking so that the pipe and fitting joints are accessible for repair.
- Mega-Lugs may be used in lieu of thrust block if allowed by local utility.

##### WATER SERVICE PIPE AND CURB STOPS

- Copper tubing for water services shall meet the requirements of Table 604.1 of the UPC, and Section 2611.2D of the CEAM Standard Specifications
- HDPE pressure pipe for water services shall meet the requirements of ASTM D2239, ASTM D2737, ASTM D3035, AWWA C901, CSA B137.1, and Section 2611.2D of the CEAM Standard Specifications
- Curb stops for water services Section 2611.2D of the CEAM Standard Specifications

##### HIGH DENSITY POLYETHYLENE PIPE (HDPE) AND FITTINGS - STORM

- HDPE pipe and fittings shall meet the requirements of ASTM F2306, and Section 2621.2A8 of the CEAM Standard Specifications
- Pipe joints shall meet the requirements Section 2621.3A3 of the CEAM Standard Specifications
- Minimum wall thickness shall be 0.035 inches for 12 and 15 inch diameter pipe, and shall be 0.05 inches for 18 and 24 inch diameter pipe.
- HDPE storm sewer crossing above and within 10-ft of existing or proposed water main or services shall meet the following standards per the MN plumbing code:
 

4" - 10" Diameter:	AASHTO M252
12" - 60" Diameter:	ASTM F2306
Fittings:	ASTM D3212

##### REINFORCED CONCRETE SEWER PIPE (RCP) AND FITTINGS - STORM

- RCP pipe and fittings shall meet the requirements of ASTM C76, and Section 2621.2A3 of the CEAM Standard Specifications
- Pipe joints shall meet the requirements of Section 2621.3A3 of the CEAM Standard Specifications
- The ASTM strength class of pipe shall be Class II unless otherwise shown on the Plans.
- The pipe shall be drawn together by some approved method of jacking or winching. This pressure must be maintained until sufficient backfill is placed to keep the joint from opening.

##### END SECTIONS - STORM

- End sections shall be provided at all pipe inlets and outlets.
- The end sections shall consist of material matching the material of the pipe, which it is being connected to. Materials and joints shall be as per the specifications described above for the applicable pipe material.
- The last 3 joints of RCP shall be tied, and the end section shall be provided with an approved trash guard.

##### MANHOLES AND CATCH BASINS - SANITARY AND STORM

- Unless otherwise noted, manhole and catch basin structures shall consist of precast concrete, and meet the requirements of Section 719.6 of the UPC (sanitary only), and Sections 2621.2C and 2621.3D of the CEAM Standard Specifications.
- Catch basins shall be provided with the following castings:
  - Along curbline: 27" Structure: Neenah R-3075-L-48" (or larger) Structure: Neenah R-3067-L
  - Isolated (In paved area): Neenah R-2553
  - Isolated (In vegetated area): Neenah R-2540-EA w/ type "C" grate
- Manholes shall be provided with the following castings:
  - Sanitary: Neenah R-1733 w/ concealed pick hole
  - Storm: Neenah R-1733 lettered "STORM", center pick hole

##### INSTALLATION

- Unless otherwise noted, installation of all water and sewer pipe, fittings, and appurtenances shall be as per the CEAM Standard Specifications.

##### TESTING REQUIREMENTS

- Water and sewer pipe, fittings, and appurtenances shall be inspected and tested as per Sections 2611.3E-2611.3H and 2621.3F-2621.3H of the CEAM Standard Specifications.
- In the event of discrepancies between the testing requirements of the MN Plumbing Code and the CEAM Standard Specifications, the most stringent will govern.

##### BITUMINOUS PAVEMENT NOTES

##### STANDARDS

- Minnesota Standard Specifications for Highway Construction, most recent edition.

##### GRANULAR BASE COURSE

- Compacted thickness of finished base course: 6"
- Process material for aggregate base shall meet the requirements of MNDOT Spec. 3138, Class 5..
- The subgrade shall be tested and observed to the satisfaction of the Engineer prior to placement of aggregate base material. Install base material as required to accommodate new plan grades.
- Wet base material to approximate optimum moisture content either prior to delivery to job site or as soon as practical after being placed on subgrade.
- Place in layers not exceeding 4" thickness (loose).
- Compact with pneumatic or vibrating steel drum rollers.
- After base course has been graded and compacted, thoroughly wet and slush roll with roller until all aggregates are thoroughly embedded.
- Allow base course to cure for a minimum of 72 hours prior to bituminous course application.

##### BITUMINOUS BASE AND SURFACE COURSE

- Mix Designation Numbers for the bituminous mixtures on this project are per MNDOT Spec. 2360
- Pavement smoothness requirements will be waived for this project.
- Density for the bituminous mixture on this project will be the ordinary compaction method (MNDOT 2360.6C).
- Bituminous Base course shall conform to MnDOT 2360, Type SPNWB330B and shall be 1½ inches thick after compaction. Bituminous Surface course shall conform to MnDOT 2360, Type SPWEA340B and shall be 1½ inches thick after compaction.
- Place no asphaltic mixture when the atmospheric temperature is below 45 degrees and falling, nor should pavement be placed under wet conditions.
- Mixing
  - Paving mixture: Uniform mixture of course aggregate, fine aggregate, mineral filler and asphaltic material.
  - Grading and mixing: Conform to applicable sections of the Minnesota Standard Specifications for Highway Construction, Section 2360.

##### CONSTRUCTION METHODS

- Properly clean base course and deliver hot mix asphaltic concrete in clean tight vehicles with covers if necessary.
- Lay to a smooth surface without segregation of material and attain compaction as early as possible. Commence rolling while the material is hot, (minimum spread temperature 250 degrees F.) as soon as it will support the roller without undue displacement or hairline cracking and continue until a minimum of 96% of maximum has been attained, no further compression can be attained and all roller marks are eliminated.
- The completed surface: Smooth, free of pockets that will retain water and shall not vary more than 1/16" per foot nor more than 1/4" under a 16' straight edge. Entire surface must drain. No flat areas are permitted.
- Perform all Work in accordance with the applicable requirements of the Minnesota Standard Specifications for Highway Construction.

##### PAINTED LINES

- Special marking paint compound especially for striping bituminous paving in one coat.
- Manufactures: Pratt & Lambert, Inc.; Sherwin Williams Co, or DuPont Co.
- Colors: Use white paint for concrete and asphalt.
- All surfaces to be painted must be thoroughly clean and dry.
- Lay out painted lines with chalk on pavement in accordance with Project Drawings.
- Accurately apply paint to the chalk marks, using striping machines, 4" wide stripes.
- Apply paint in strict accordance with the manufacturer's directions.
- Protect all paint from damage by traffic until dry.
- Apply handicap logo at handicap stall.

##### FIELD QUALITY CONTROL

- Aggregate Base Testing:
  - The granular base course shall be test rolled and observed by the Contractor's independent soils technician as per MNDOT 2211.3C2 (Quality Compaction Method). Once the base course has been tested to the satisfaction of the Engineer, pavement may be placed.
  - One mechanical analysis (ASTM D-422) per 500 cubic yards of base or fraction thereof.

##### 2) Bituminous Testing:

- Test temperature of first truck.
- Ordinary compaction (MNDOT 2360.6C)

##### CONCRETE PAVEMENT, CURB & GUTTER, AND SIDEWALK

##### STANDARDS

- ACI 318, ACI 315, CRSI, ACI 301, latest adoptions.
- Minnesota Standard Specifications for Construction, most recent edition

##### GRANULAR BASE COURSE MATERIAL

- Compacted thickness of finished base: 6" - Concrete Pavement/Aprons  
4" - Concrete Sidewalk
- Base material shall consist of MNDOT 3149.2B2 Select Granular Borrow.

##### AGGREGATES

- Coarse: MnDOT Spec. 3137.
- Fine: MnDOT Spec. 3136.

##### WATER

- Clean, fresh and potable, MnDOT Spec. 3906.

##### AIR ENTRAINING ADMIXTURES

- ASTM C260.
- Provide entrainment of 4 - 7 percent by volume.

##### PORTLAND CEMENT

- ASTM C150, Type I plus an approved air entraining agent, or Type IA air-entraining Portland cement.

##### OTHER ADMIXTURES

- MNDOT Spec. 3113.

- Calcium Chloride or materials containing chlorides or nitrates shall not be allowed.

##### PROPORTIONING AND DESIGN OF MIXES

- Concrete Classifications
  - Curb and gutter, slip-formed concrete: MNDOT Spec. 2461, Mix Design 3F32
  - Sidewalk, aprons, incidental concrete, manual curb & gutter: MNDOT Spec. 2461, Mix Design 3F52
  - Concrete pavements: MNDOT Spec. 2301, Mix Design 3A41
  - Repair concrete, fast strength concrete: MNDOT Spec. 2301, Mix Design 3A41HE
- Concrete Specifications:
  - 3F32: ½ - 3" slump, 4500 psi, 5-8% air
  - 3F52: 2 - 5" slump, 4500 psi, 5-8% air
  - 3A41: 2 - 5" slump, 4500 psi, 5-8% air
  - Temperatures of all concrete during placement shall be 50-degree F to 90-degree F

##### CONCRETE PLACEMENT

- Place concrete as soon as possible after mixing. Place before initial set has occurred, and in no event after it has contained its water content for more than one hour.
- Avoid overworking concrete or allowing concrete to fall unrestricted for excessive vertical distances, and other situations which can cause segregation of the aggregates.
- Concrete pavements shall be placed in accordance with applicable portions of MnDOT 2301.
- Sidewalks shall be placed in accordance with MnDOT 2521.
- Curb and gutter shall be placed in accordance with MnDOT 2531.

##### PROTECTION

- Provide adequate protection against rain, sleet and snow before and during placement and finishing of concrete.
- Protect concrete from premature drying. Provide temporary covering as required. Keep concrete continuously moist for 7 days.
- Treat concrete with membrane curing compound in accordance with MnDOT 2531.3G.

##### COLD WEATHER CONCRETE

- Do not place concrete when the atmospheric temperature is below 40 degrees F., or when the concrete is likely to be subjected to freezing temperatures within 24 hours after it has been deposited unless adequate temporary heating is provided.
- Maintain concrete temperature of 40 to 90 degrees F. for 3 days. Protect from freezing for the following 5 days.
- No frozen materials may be used in the concrete. Chemicals may not be used to prevent freezing unless approved by the Engineer.
- Perform all cold weather concreting in accord with ACI 306.

##### HOT WEATHER CONCRETE

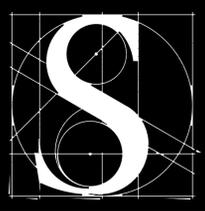
- Do not place concrete when the atmospheric temperature is above 100 degrees F.
- Maintain concrete temperature of 40 to 90 degrees F. for 3 days. Protect from temperatures over 90 degrees for the following 5 days.
- Thoroughly wet dry porous surfaces before concreting.
- Water reducing admixtures with retarding properties are required for all concrete placed when the temperature exceeds 80 degrees F.
- Perform all hot weather concreting in accord with ACI 305.

##### FINISHING

- Provide a broomed finish on exterior sidewalks and ramps unless noted otherwise.

##### QUALITY CONTROL

- The Contractor shall hire an independent testing firm to provide the following tests:
  - The independent testing technician shall perform random field testing of the fresh concrete including slump, air content, and temperature. (ASTM C143, C173, C231 and C138). One series of the aforementioned tests shall be performed on the first load of concrete.
  - The independent testing technician shall cast a set of four compression test cylinders for the first load of concrete as well as 1 set for every 100 cubic yards, or fraction thereof, of concrete thereafter. Compression tests shall be performed on one test cylinder at 7 days and two test cylinders at 28 days. The fourth test cylinder shall be retained in the event of failing compression tests on the 28-day test cylinders.



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www.schultzengineeringdesign.com

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of the state of Minnesota

BRIAN J. SCHULTZ, PE

03/09/2018 43129  
DATE LICENSE NO.

Revisions

1728  
Sjoquist Project Number  
18005  
Schultz Eng. Project Number

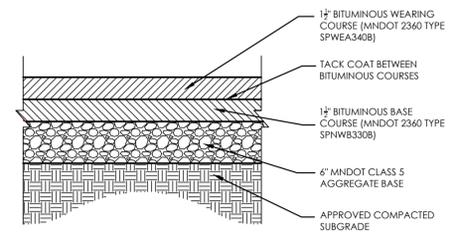
NEW BUILDING  
HANOVER  
DENTAL

HANOVER  
MINNESOTA

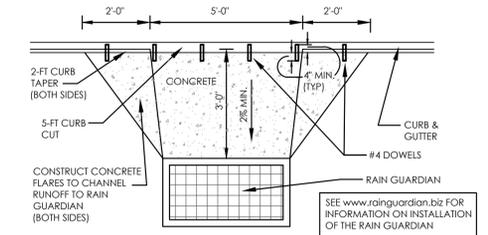
STANDARD DETAILS

C-100.2

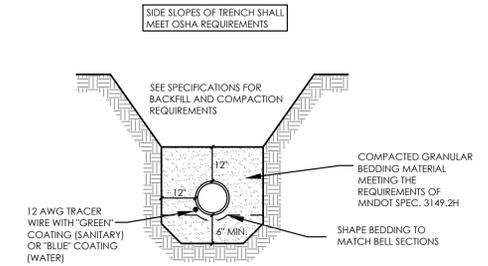
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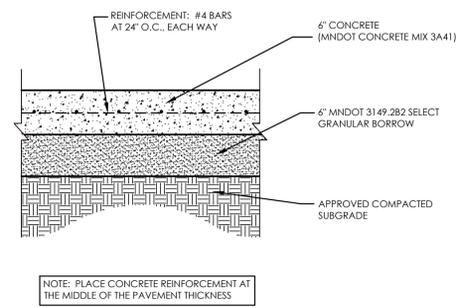
3 BITUMINOUS PAVEMENT SECTION NTS



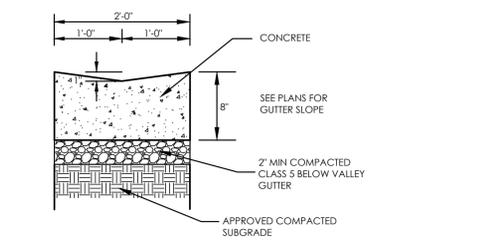
2 CURB AT RAIN GUARDIAN NTS



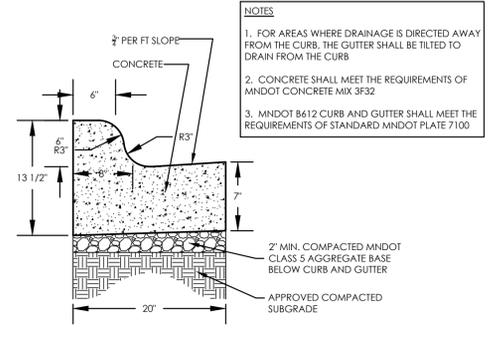
1 PIPE BEDDING DETAIL NTS



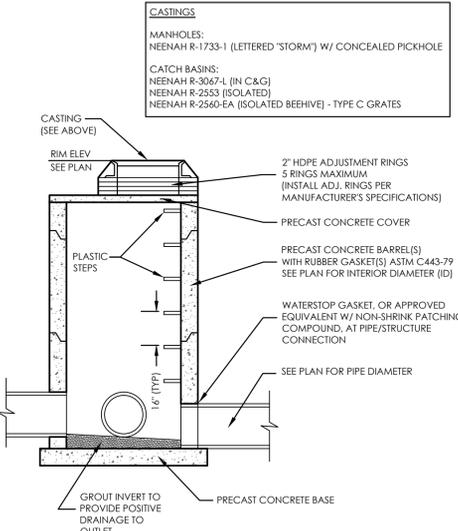
7 CONCRETE APRON/PAVEMENT SECTION NTS



6 VALLEY GUTTER NTS

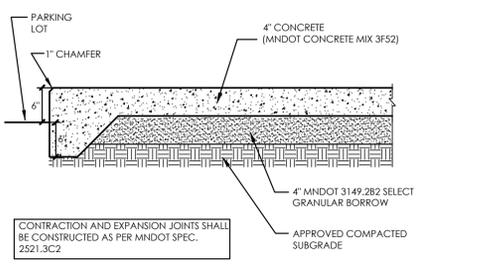


5 CURB & GUTTER (MNDOT B612) NTS

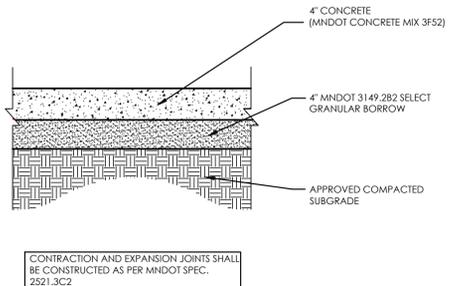


4 STORM MANHOLE OR CATCH BASIN NTS

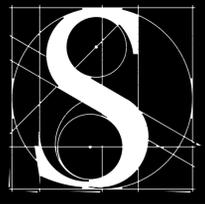
- NOTES:
1. SEE PLAN FOR INTERIOR DIAMETERS (ID) OF PRECAST CONCRETE BARREL SECTIONS
  2. SEE PLAN FOR PIPE CUT-OUT SECTIONS
  3. CONSTRUCT GROUTED FLOW LINES WITHIN STRUCTURE TO DIRECT FLOW TO OUTLET WITH NON-SHRINK GROUT
  4. FILL ANNULAR SPACE BETWEEN PIPE AND BARREL WITH NON-SHRINK GROUT.
  5. PRECAST CONCRETE COVERS, BARREL SECTIONS, AND BASES SHALL MEET THE REQUIREMENTS OF STANDARD MNDOT PLATES 4011 AND 4020
  6. PLASTIC STEPS SHALL BE AS PER MNDOT STANDARD PLATE 4180 AND SHALL BE PLACED OVER THE OUTLET PIPE



9 THICKENED EDGE SIDEWALK NTS



8 CONCRETE SIDEWALK SECTION NTS



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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of the state of Minnesota

*Brian J. Schultz, PE*  
BRIAN J. SCHULTZ, PE

03/09/2018 43129  
DATE LICENSE NO.  
Revisions

1728  
Sjoquist Project Number  
18005  
Schultz Eng. Project Number

NEW BUILDING  
HANOVER  
DENTAL

HANOVER  
MINNESOTA

SCALE: 1" = 20'



GRADING PLAN

C-101.1

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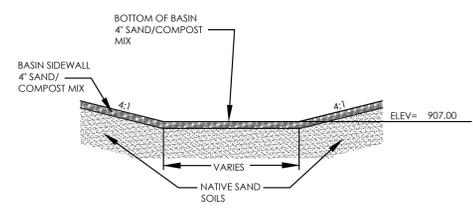
### GRADING NOTES:

- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATIONS, AND RIM AND INVERT ELEVATIONS, OF EXISTING DRAINAGE AND SANITARY STRUCTURES. LOCATION AND SIZE OF EXISTING SANITARY, WATER, AND STORM SEWER STUBS, AND EXISTING GRADES SHALL ALSO BE VERIFIED.
- EXISTING TOPOGRAPHICAL INFORMATION WAS OBTAINED FROM A TOPOGRAPHICAL SURVEY PROVIDED BY MEYER-ROHLIN LAND SERVICES, BUFFALO, MN, (763) 682-1781
- BENCHMARK: TOP NUT OF HYDRANT LOCATED ON THE NORTHEAST CORNER OF 5TH STREET NE AND LABEAUX AVE NE (SEE PLAN). ELEV = 914.48
- NOTIFY ENGINEER IMMEDIATELY IF ANY INCONSISTENCIES ARE DISCOVERED BETWEEN ACTUAL SITE CONDITIONS AND WHAT IS SHOWN ON THE PLANS, WHICH ARE SIGNIFICANT ENOUGH TO ALTER THE INTENT OF THE DRAWINGS.
- IF REQUIRED BY THE MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY, THE OWNER OR CONTRACTOR SHALL OBTAIN A PLUMBING PERMIT PRIOR TO THE INSTALLATION OF ANY STORM SEWER UTILITIES.
- THE CONTRACTOR SHALL CONTACT GOPHER ONE CALL AT (800) 252-1166 FOR A UTILITY LOCATE PRIOR TO THE START OF CONSTRUCTION AND VERIFY LOCATIONS OF UTILITIES BEFORE BEGINNING WORK.
- SEE SHEET C2 FOR STANDARD DETAILS.
- ALL LENGTHS OF STORM SEWER OR CULVERT PIPE SPECIFIED ON THIS PLAN INCLUDE THE LENGTHS OF ANY ASSOCIATED FLARED END SECTIONS.
- TRASH GUARDS SHALL BE INSTALLED ON ALL STORM SEWER END SECTIONS.
- FINISHED ELEVATIONS OF LAWN/GREEN AREAS ADJACENT TO BUILDINGS SHALL BE A MINIMUM OF 6" BELOW FINISHED FLOOR OR TOP-OF-BLOCK ELEVATION.
- CONTRACTOR SHALL PERFORM CALCULATIONS TO VERIFY EARTHWORK QUANTITIES. CONTRACTOR'S BID SHALL BE BASED ON EARTHWORK CALCULATIONS COMPLETED BY THE CONTRACTOR
- SPOT ELEVATIONS ARE FLOW LINE AND/OR FINISHED GRADES, UNLESS OTHERWISE INDICATED. TOP OF CURB ELEVATIONS ARE 6" ABOVE THE FLOW LINE SPOT ELEVATION SHOWN ON THE PLANS, UNLESS NOTED OTHERWISE.
- "EX" DENOTES EXISTING SPOT ELEVATIONS. "HP" DENOTES HIGH POINTS.
- ALL PROPOSED ELEVATIONS ARE TOP OF PAVING OR GUTTER, UNLESS NOTED OTHERWISE. PROPOSED ELEVATIONS ARE INTENDED TO PROVIDE POSITIVE DRAINAGE TOWARDS CATCH BASINS AND/OR OUTLETS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE REQUIRED ELEVATIONS, WHICH WILL PROMOTE POSITIVE DRAINAGE THROUGHOUT THE PROJECT SITE.

NOTE: CADD FILES FOR ESTIMATING EARTHWORK QUANTITIES ARE AVAILABLE TO CONTRACTORS FOR PREPARING BIDS. IN ORDER TO RECEIVE THE CADD FILES, THE CONTRACTOR WILL NEED TO SIGN A HOLD-HARMLESS AGREEMENT PROVIDED BY SCHULTZ ENGINEERING & SITE DESIGN, AND AGREE TO PAY A \$50 PROCESSING FEE. THE CADD FILES WILL BE RELEASED UPON RECEIPT OF THE CHECK.

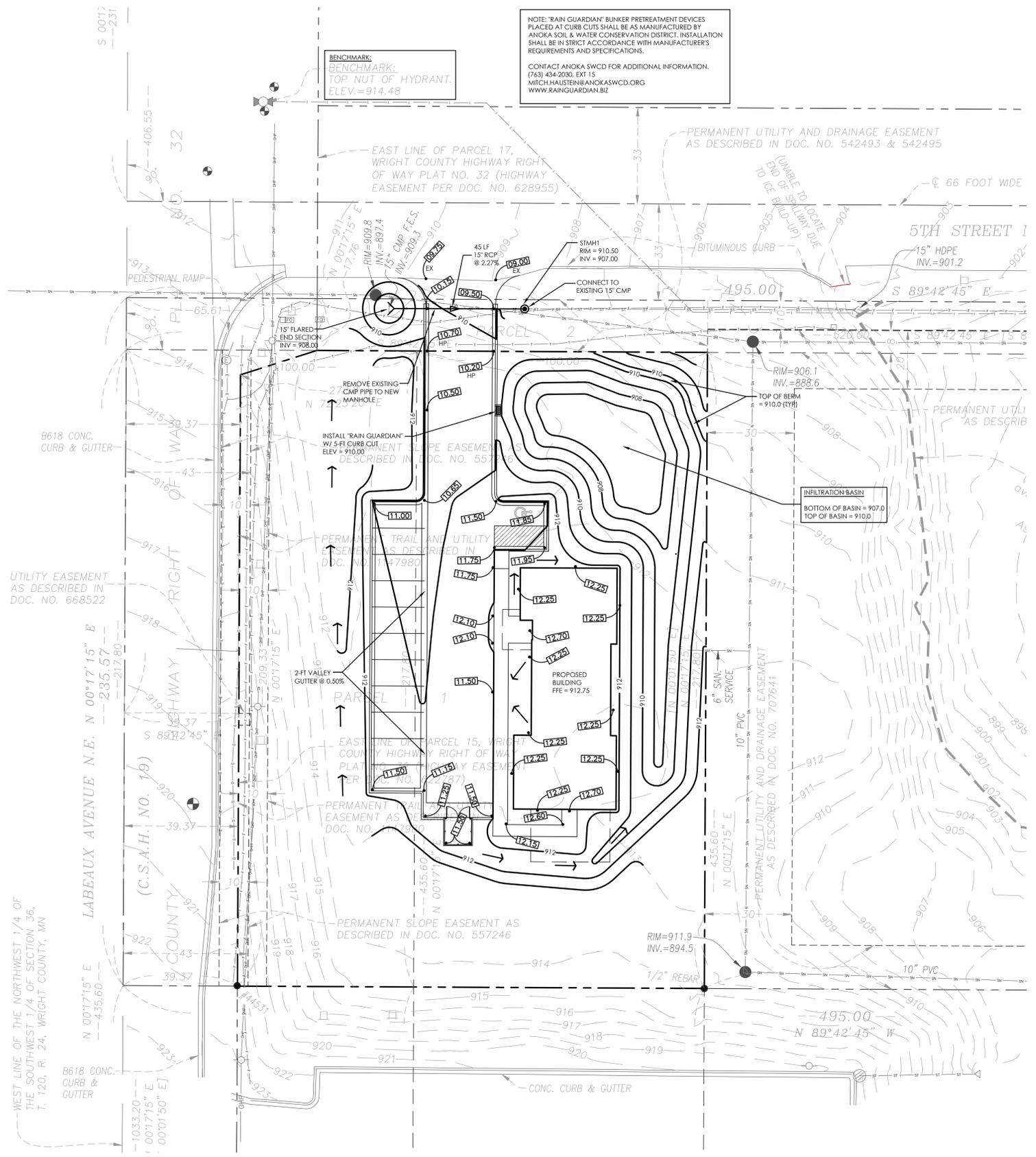
### INFILTRATION BASIN NOTES:

- TRAFFIC FROM CONSTRUCTION EQUIPMENT SHALL BE LIMITED AS MUCH AS POSSIBLE ACROSS INFILTRATION BASIN AREAS, AND BE ONLY LOW IMPACT TRACK EQUIPMENT. BASIN AREAS SHALL BE EXCAVATED WITH A BACKHOE STATIONED OUTSIDE OF THE AREA AS MUCH AS POSSIBLE.
- DURING CONSTRUCTION OF THE ADJACENT PARKING LOT AND BUILDING, THE INFILTRATION BASIN AREA SHALL BE PROTECTED FROM TRAFFIC AND SEDIMENT WITH SILT FENCE.
- THE BOTTOM OF THE INFILTRATION BASIN SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 24 INCHES WITH THE USE OF APPROPRIATE EQUIPMENT (TILLER, RIPPER, ETC.). AFTER SCARIFICATION, THE BASIN SIDEWALLS AND BOTTOM SHALL BE LINED WITH A MINIMUM OF 4-INCHES OF SAND/COMPOST MIX. SAND/COMPOST MIX SHALL BE PLACED AS LOOSELY AS POSSIBLE.
- ONCE EXCAVATED TO FINAL GRADE INFILTRATION AREAS SHALL BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITY IS REACHING THE INFILTRATION AREA. ALL INFILTRATION AREAS SHALL BE INSPECTED TO ENSURE THAT UNAUTHORIZED EQUIPMENT IS NOT BEING DRIVEN ACROSS THE INFILTRATION AREAS.
- ONCE THE INFILTRATION BASINS ARE COMPLETED AND THE SITE HAS BEEN STABILIZED, THE CONTRACTOR SHALL ARRANGE AND PAY FOR TESTING THE INFILTRATION RATES OF THE BOTTOMS OF THE BASINS. THE TEST RESULTS SHALL BE SUBMITTED TO THE CITY AND THE ENGINEER.
- FINAL STABILIZATION OF THE INFILTRATION BASINS SHALL NOT BE COMPLETED UNTIL THE UPSTREAM DRAINAGE AREAS HAVE BEEN STABILIZED.



- NOTES:
- BASIN BOTTOM SHALL BE SEEDDED W/ NATIVE SEED MIX AND/OR PLANTINGS
  - SAND/COMPOST MIX SHALL CONSIST OF 70% CLEAN SAND & 30% COMPOST (MN STORM WATER MANUAL MIX "B"). SAND SHALL CONSIST OF CLEAN CONSTRUCTION SAND, FREE OF DELETERIOUS MATERIALS - AASHTO M-41 OR ASTM C-33 WASHED. COMPOST SHALL CONSIST OF MNDOT GRADE 2

1 INFILTRATION BASIN #1



NOTE: "RAIN GUARDIAN" BUNKER PRETREATMENT DEVICES PLACED AT CURB CUTS SHALL BE AS MANUFACTURED BY ANOKA SOIL & WATER CONSERVATION DISTRICT. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS.  
CONTACT ANOKA SWCD FOR ADDITIONAL INFORMATION.  
(763) 434-2030 EXT 15  
MITCH.HAUSTEIN@ANOKASWCD.ORG  
WWW.RAINGUARDIAN.BIZ

BENCHMARK:  
TOP NUT OF HYDRANT.  
ELEV.=914.48

WEST LINE OF THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 36, T. 120, R. 24, WRIGHT COUNTY, MN

LABEAUX AVENUE N.E. N 00°17'15" E 235.57' - -217.80'

(C.S.A.H. NO. 19)

WRIGHT COUNTY HIGHWAY RIGHT OF WAY PLAT NO. 32 (HIGHWAY EASEMENT PER DOC. NO. 628955)

PERMANENT TRAIL AND UTILITY EASEMENT AS DESCRIBED IN DOC. NO. 557246

PERMANENT SLOPE EASEMENT AS DESCRIBED IN DOC. NO. 557246

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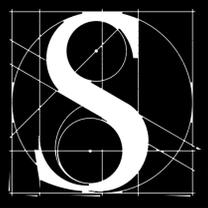
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 www.schultzengineeringdesign.com

*I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of the state of Minnesota*

*Brian J. Schultz*  
**BRIAN J. SCHULTZ, PE**

**03/09/2018**      **43129**  
 DATE                      LICENSE NO.

Revisions

**1728**  
 Sjoquist Project Number  
**18005**  
 Schultz Eng. Project Number

**NEW BUILDING**  
**HANOVER**  
**DENTAL**

**HANOVER**  
**MINNESOTA**

SWPPP - NOTES

18005SWPPPNotes.dwg

**C-101.2**

**PROJECT INFORMATION**

Project Description

This project will consist of the construction of a new dental office building with an approximate footprint of 2,500 SF, as well as parking lot and concrete sidewalk. Storm water management for this project will consist of an infiltration basin.

Disturbed Area & Impervious Surface Tabulation  
 (within proposed construction area)

Anticipated Disturbed Area	0.40 acres
Existing Impervious Area	0.00 acres
Proposed Impervious Area	0.22 acres
Net Impervious Area Increase	0.22 acres

Permanent Site Drainage

The vast majority of the proposed impervious surfacing has been designed to be routed to a proposed infiltration basin. Due to the landlocked nature of the wetland in the adjacent property to the east, which the subject property naturally drains to, the proposed infiltration basin has been sized to collect and infiltrate the entire runoff volume directed to it from the 100-year storm event.

Receiving Surface Waters

The following surface waters could receive storm water runoff from this project, and are within 1 mile of the project site:

Surface Water	Type of Surface Water	Impaired Water?	Special Water?	USEPA Approved TMDL for Impaired Water?	Comments
Project not subject to NPDES Permit					

SEDIMENT AND OTHER POLLUTANTS

This SWPPP has been designed mainly to provide erosion and sediment control of naturally occurring soils at this site (ie: sands, loams, and clays). Although this SWPPP does address pollution prevention of other man-made materials, it is assumed that these materials will consist of debris from existing structures and pavements to be demolished, or debris and chemicals (ie: fuels, new paints, etc.) resulting from new construction.

There are no known solid wastes or hazardous materials buried below grade at this site. If such wastes or hazard materials are discovered during construction, the SWPPP Coordinator (described below) will be responsible for notifying the Engineer. This SWPPP will then be revised to address the presence and disposal of these additional pollutants

EROSION PREVENTION AND SEDIMENT CONTROL BMPs

Standards and References

Materials and construction methods of all BMPs included in this SWPPP shall be as per the Minnesota Department of Transportation (MNDOT) Standard Specifications for Construction, latest edition. The Contractor and SWPPP Coordinator shall obtain a current copy of MNDOT's Standard Specifications for Construction and familiarize themselves with the specification sections applicable to this SWPPP, as there are several BMPs that specifically reference these sections.

The Contractor and SWPPP Coordinator shall be expected to be familiar with the applicable MNDOT specification sections during construction. No additional compensation will be paid to the Contractor for additional work due to unfamiliarity with these specification sections.

Undisturbed Areas

If shown on the plan, the Contractor shall delineate areas that are not to be disturbed on the site. This may be done with flags, stakes, signs, silt fence, etc., and shall be completed prior to the start of any grading operations. Regardless of the delineation method the Contractor chooses to use, the Contractor must communicate to his/her personnel and subcontractors that these areas are not to be disturbed and construction equipment (including trucks and personal vehicles) shall not be allowed in these areas.

The Contractor shall minimize compaction and preserve topsoil as much as possible at the site. In pervious ("green") areas that are not essential to the construction of the project, the Contractor shall avoid construction traffic and maintain the existing condition of these areas.

Temporary and Permanent Stabilization

All exposed soil areas (including stockpiles) shall be provided with temporary or permanent cover within 14 days of construction activity temporarily or permanently ceasing in that portion of the site. Temporary or permanent drainage ditches or swales which drain off-site or to a surface water, and are within 200 lineal feet of the property line or surface water shall be provided with temporary or permanent cover within 24 hours of construction. Placement of temporary or permanent cover shall be initiated immediately upon suspension or completion of excavation operations.

Temporary Cover:

If the Contractor chooses to halt grading operations in a portion of the site (or the whole site) for a period exceeding 14 days, and grading operations (rough or finish grading) in the affected areas has not yet been completed, temporary cover shall be placed. Affected areas consisting of drainage ditches or swales connected to, and within, 200 lineal feet of a property line or surface water shall be provided with temporary cover within 24 hours of connection. Depending on the Contractor's schedule, the temporary cover shall consist of one of the following BMPs:

1). Disconnected Mulch

- a). Disconnected mulch may be used in an area of the site (or the whole site) if the Contractor is halting grading operations for a period that is relatively short, but exceeds 14 days.
- b). The mulch shall be Type 3 per MNDOT Spec. 3882
- c). An adequate quantity of mulch shall be evenly distributed to achieve 90% coverage of the exposed soils.
- d). Mulch shall be placed as per MNDOT 2575.3F.
- e). All mulch shall be disc anchored as per MNDOT 2575.3G. Prior to the placement and disanchoring of the mulch, the soils shall be loosened and the area smooth-rough graded per MNDOT 2575.3B1.
- f). Any areas that are exposed as a result of wind action after the initial mulch placement shall be covered with additional mulch to maintain 90% coverage.

2). Temporary Seeding with Mulch

- a). Temporary seeding with mulch may be used in areas of the site (or the whole site) if the Contractor is halting grading operations for a period that is relatively long. Although mulch still needs to be applied as described above, once the temporary seeding/turf is established, the mulch will no longer need to be maintained. The temporary seeding/turf will require very little maintenance.
- b). Prior to the sowing of temporary seed, the soils shall be loosened and the area smooth-rough graded per MNDOT 2575.3B1.
- c). Contractor shall utilize Seed Mixes 100, 110, or 130 per MNDOT Spec. 3876 for temporary seeding.
- d). Temporary seeding shall be sown per MNDOT Spec. 2575.3D.
- e). Once temporary seeding has been sown, mulch shall be placed over the area as described above.

Permanent Cover:

Upon completion of finish grading and/or placement of topsoil, initiation of the placement of permanent cover shall begin immediately over all exposed areas. This includes areas designated for impervious surfacing (ie: buildings, pavements/gravel bases, sidewalks, etc.). Where the construction schedule will not allow for the placement of the permanent impervious surfacing within 14 days of the completion of finish grading, temporary cover shall be provided in these areas, as described above, until the permanent impervious surfacing can be constructed. Affected areas consisting of drainage ditches or swales connected to, and within, 200 lineal feet of a property line or surface water, shall be provided with permanent cover within 24 hours of connection.

Areas designated for permanent turf establishment shall be provided with one or more of the following BMPs (see plan):

1). Permanent Seeding with Mulch

- a). Unless otherwise noted on the plans, all areas designated for turf establishment shall be provided with permanent seeding.
- b). In addition to the plan included as part of this SWPPP, the Contractor shall verify if a Landscaping Plan has been included in the plans by the Architect. If a Landscape Architect has specified higher quality permanent cover (ie: sod, hydroseeding, etc.), the Contractor shall provide this permanent cover in lieu of the permanent seeding specified in this SWPPP.
- c). Prior to the sowing of permanent seed, the soils shall be loosened and the area smooth-rough graded per MNDOT 2575.3B1.
- d). Contractor shall utilize Seed Mix 260 per MNDOT Spec. 3876 for permanent seeding.
- e). Permanent seeding shall be sown per MNDOT Spec. 2575.3D.
- f). Once permanent seeding has been sown, mulch shall be placed over the area as described above (under Temporary Cover), unless noted otherwise.

2). Erosion Control Blanket

- a). Erosion control blanket shall be placed in areas as shown on the plan included in this SWPPP. These areas shall still be provided with permanent seeding, as described above, beneath the erosion control blanket.
- b). Erosion control blanket shall meet the requirements indicated in MNDOT Spec. 3885. See plan for category(s) of erosion control blanket.
- c). Erosion control blanket shall be installed as per MNDOT Spec. 2575.3J2.
- d). Erosion control blanket specified in drainage ditches and swales connected to, and within 200 lineal feet, of a property line or surface water shall be installed within 24 hours of the completion of finish grading (including permanent seeding).

3). Riprap

- a). Riprap shall be placed in areas as shown on the plan included in this SWPPP.
- b). All riprap shall be underlain with Type 4 geotextile fabric. The fabric shall meet the requirements of MNDOT Spec. 3733 and shall be installed as per MNDOT Spec. 2511.3B2.
- c). Riprap materials shall meet the requirements of MNDOT Spec. 3601, and shall be Class 3, unless noted otherwise on the plans.
- d). Riprap shall be considered "Random Riprap" and shall be placed as per MNDOT Spec. 2511.
- e). Although it is permitted for the riprap to be placed with machinery, it will be necessary for the Contractor to hand place some of the riprap in order to provide a dense, well-keyed layer of stones with the least practical quantity of void space.
- f). The minimum thickness of the riprap shall be 18 inches, unless otherwise noted on the plans.
- g). Riprap designated at the end of pipe outlets shall be placed within 24 hours of installation of the pipe outlet end section.
- h). Riprap specified in drainage ditches and swales connected to, and within 200 lineal feet, of a property line or surface water shall be installed within 24 hours of the completion of finish grading.

Sediment Control

The following sediment control BMPs shall be implemented as part of this project:

1). Silt Fence

- a). Silt Fence shall be installed at the locations shown on the plan included in this SWPPP.
- b). Silt fence shall be machine sliced and materials shall meet the requirements of MNDOT Spec. 3886.
- c). Silt fence shall be installed as per MNDOT Spec. 2573.3C1.
- d). Silt fence shall be installed prior to any upgradient grading operations, and shall remain in place and maintained adequately until upgradient areas achieve Final Stabilization (see below)
- e). Silt fence shall be repaired or replaced if damaged during, or after, rain events, or if accumulated sediment on the upstream side of the fence reaches 1/3 of the height of the fence. Repair or replacement of silt fence shall be completed within 24 hours of discovery.
- f). Portions of silt fence may be removed to accommodate short-term activities, such as vehicle passage. Short-term activities shall be completed as quickly as possible, and new silt fence installed immediately after completion of the short-term activity. If rainfall is imminent or forecasted in the near future, new silt shall be installed regardless of if the short term activity has been completed or not. The Contractor is advised to schedule short term activities during dry weather as much as practicable. No additional compensation will be paid due to additional silt fence associated with short-term activities.
- g). Temporary soil stockpiles shall be placed on the site in areas upgradient from silt fence. Where the Contractor chooses to place temporary soil stockpiles outside designated silt fenced areas, the stockpiles shall be surrounded by additional silt fence. Under no circumstances shall temporary soil stockpiles be placed over surface waters, curb and gutter, catch basins, culvert inlets or outlets, or ditches.

2). Catch Basin Protection

- a). WIMCO Road Drain protection devices, as manufactured by WIMCO, shall be used for catch basin protection on this project. WIMCO can be contacted at (952)-233-3055, and their web page is www.roadrain.com.
- b). "Road Drain Top Slab" devices shall be installed at all catch basin locations immediately after placement of the catch basin structures. "Road Drain Top Slab" devices shall remain in place and be adequately maintained until permanent surfacing is constructed (ie: curb and gutter, pavements, and/or gravel surfacing). In areas designated for turf establishment, "Road Drain Top Slab" devices shall remain in place until Final Stabilization of all upgradient areas is established.
- c). Upon construction of the permanent surfacing, the "Road Drain Top Slab" devices shall be replaced with the WIMCO product specified on the plans. The WIMCO devices shall remain in place until Final Stabilization of all upgradient areas has been established.
- d). The contractor shall install and maintain the catch basin protection devices as per the manufacturer's instructions and specifications.

3). Culvert Inlet Protection

- a). Culvert inlet protection shall be provided at all culvert inlet locations immediately after construction of the culvert. See plan included in this SWPPP for culvert inlet locations.
- b). Culvert inlet protection shall consist of geotextile fabric wrapped around, and completely covering the inlet end section. The geotextile fabric shall be the same fabric used in silt fence applications and meet the requirements of MNDOT Spec. 3886.
- c). The culvert inlet protection shall remain in place and adequately maintained until Final Stabilization of all upgradient areas has been established.
- d). Culvert inlet protection shall be repaired or replaced if damaged during, or after, rain events, or if accumulated sediment reaches 1/2 of the diameter of the culvert pipe. Repair or replacement of culvert inlet protection shall be completed within 24 hours of discovery.

4). Temporary Rock Construction Entrance

- a). Temporary rock construction entrances shall be installed at the locations shown on the plan included in this SWPPP. See detail for temporary rock entrance design.
- b). If the Contractor chooses to access the site from locations other than where temporary rock entrances are specified on the plans, additional temporary rock entrances shall be placed at these locations, as well.
- c). Temporary rock entrance shall be constructed prior to the start of grading operations, and shall remain in place and be adequately maintained until Final Stabilization has been established.
- d). Temporary rock entrances shall be maintained in such a manner that the entrances prevent sediment tracking onto adjacent streets. If a temporary rock entrance is found to be ineffective, it shall be replaced or improved within 24 hours of discovery.
- e). The Contractor has the option to place Type 4 geotextile fabric beneath the temporary rock entrance. The fabric may extend the life of the entrance as it will reduce rock "sinking" into the underlying soils. If the Contractor chooses to use fabric, it should meet the requirements of MNDOT Spec. 3733 and shall be installed as per MNDOT Spec. 2511.3B2.
- f). If sediment tracking from the site is discovered on adjacent streets, the sediment shall be removed with a street sweeper or other approved method within 24 hours of discovery. This shall be done throughout construction of the project. This sediment may be returned and graded over exposed areas of the site, or disposed of off site per MPCA requirements.

The City may order street sweeping to be performed at the Contractor's or Owner's expense if City staff find that construction activities are resulting in sediment or debris being tracked onto City streets.

5). Filter Logs

- a). Filter logs shall be installed at the locations shown on the plan included in this SWPPP.
- b). Filter logs shall consist of Type Wood Fiber bialsols and meet the requirements of MNDOT Spec. 3897.
- c). Filter logs shall be installed as per MNDOT Spec. 2573.3J.
- d). Filter logs shall be installed immediately after placement of erosion control blanket.
- e). Filter logs shall remain in place for the life of the project, and shall be allowed to degrade naturally.

Dewatering

If dewatering of sandy subsols is required for this project, the pump discharge shall be treated prior to discharge off-site or into a surface water. Treatment of discharge shall be achieved with the use of a "Dandy Dewatering Bag" (or approved equivalent), as manufactured by Dandy Products, Inc. Dandy Products, Inc. can be contacted at (877) 307-0141, and their web page is www.dandyproducts.com. The "Dandy Dewatering Bag" shall be installed, utilized, and maintained per the manufacturer's instructions and specifications.

Once dewatering water has been treated, it may be discharged off-site or to a surface water. The discharge shall be visually checked to ensure that it is relatively clean and not visibly different from any receiving waters. If discharge is noticeably "dirty", the Engineer shall be contacted as additional treatment methods may be necessary.

Adequate erosion control shall be provided at the point of discharge if it is located in an area with exposed soils or established turf. This erosion control may consist of temporarily placed rip rap, or other approved energy dissipation measures. The type of erosion control measure shall be at the Contractor's discretion, depending on the location of the dewatering discharge and the unique site characteristics. The erosion control measures shall be effective and shall be maintained adequately such that no erosion occurs at the point of discharge.

Pollution Prevention Management

Solid waste accumulated during construction, including collected sediment, construction materials, roofing debris, construction debris, paper, plastics, and other solid wastes shall be disposed of in accordance with MPCA disposal requirements:

- 1). Building products that have the potential to leach pollutants shall be maintained under cover (e.g., plastic sheeting or temporary roof) to prevent the discharge of pollutants or protected by a similarly effective means designed to minimize contact with storm water.
- 2). Pesticides, herbicides, insecticides, fertilizers, treatment chemicals, and landscape materials shall be maintained under cover (e.g., plastic sheeting or temporary roof) to prevent the discharge of pollutants or protected by similarly effective means designed to minimize contact with stormwater.
- 3). Hazardous materials, toxic waste, (including oil, diesel fuel, gasoline, hydraulic fluids, paint solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids) shall be properly stored in sealed containers to prevent spills, leaks or other discharge. Restricted access storage areas shall be provided to prevent vandalism. Storage and disposal of hazardous waste or hazardous materials shall be in compliance with Minn. R. ch. 7045 including secondary containment as applicable.
- 4). Solid waste shall be stored, collected and disposed of properly in compliance with Minn. R. ch. 7035.
- 5). Portable toilets shall be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. ch. 7041.

The Contractor shall take steps to prevent the discharge of spilled or leaked chemicals, including fuel, from any area where chemicals or fuel will be loaded or unloaded including the use of drip pans or absorbents unless infeasible. The Contractor shall conduct fueling in a contained area unless infeasible. The Contractor shall ensure adequate supplies are available at all times to clean up discharged materials and that an appropriate disposal method is available for recovered spilled materials. The Contractor shall report and clean up spills immediately as required by Minn. Stat. § 115.061, using dry clean up measures where possible.

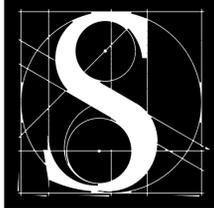
If the Contractor washes the exterior of vehicles or equipment on the project site, washing shall be limited to a defined area of the site. Runoff from the washing area shall be contained in a sediment basin or other similarly effective controls and waste from the washing activity shall be properly disposed of. The Contractor shall properly use and store soaps, detergents, or solvents. No engine degreasing shall be allowed on site.

The Contractor shall provide effective containment for all liquid and solid wastes generated by washout operations (concrete, stucco, paint, form release oils, curing compounds and other construction materials) related to the construction activity. The liquid and solid washout wastes shall not contact the ground, and the containment shall be designed so that it does not result in runoff from the washout operations or areas. Liquid and solid wastes shall be disposed of properly and in compliance with MPCA rules. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

FINAL STABILIZATION

Final Stabilization shall be considered established once the following requirements have been achieved:

- 1). All soil disturbing activities at the site have been completed and all soils are stabilized by a uniform potential vegetative cover with a density of 70 percent of its expected final growth density over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions.
- 2). The permanent storm water management system is constructed, and is operating as designed. Temporary or permanent sedimentation basins that are to be used as permanent water quality management basins have been cleaned of any accumulated sediment. All sediment has been removed from conveyance systems and ditches are stabilized with permanent cover.
- 3). All temporary synthetic and structural erosion prevention and sediment control BMPs have been removed from the project site. BMPs designed to decompose on site may be left in place.



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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of the state of Minnesota

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DATE 03/09/2018 43129  
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NEW BUILDING  
HANOVER DENTAL

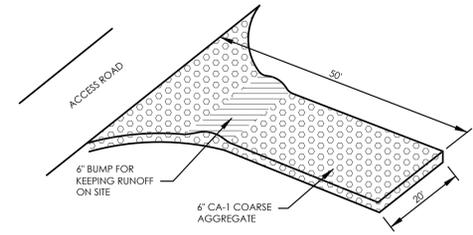
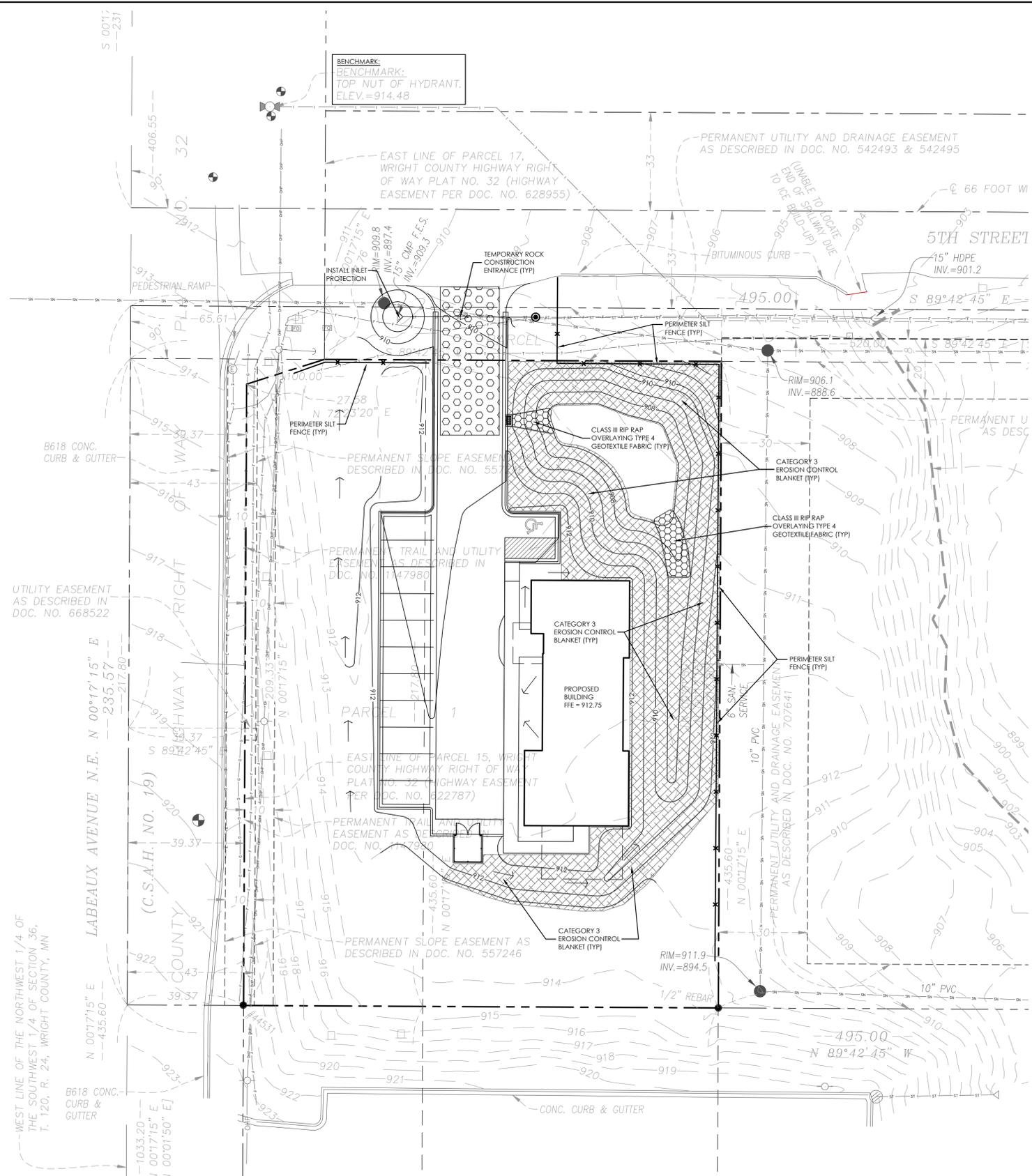
HANOVER MINNESOTA

SCALE: 1" = 20'  
0 20 40

SWPPP - PLAN VIEW

C-101.3

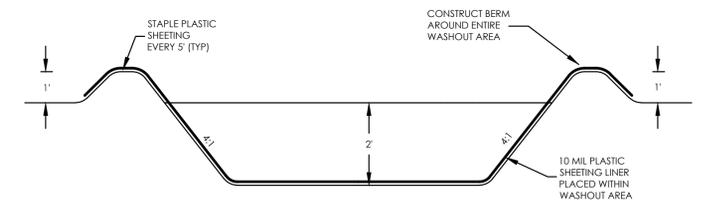
18005SWPPP-Plan.dwg



- 1. THE ROCK ENTRANCE SHALL BE CONSTRUCTED PRIOR TO THE START OF GRADING OPERATIONS.
- 2. THE ENTRANCE SHALL BE GRADED SUCH THAT POSITIVE DRAINAGE DURING CONSTRUCTION IS PROVIDED.
- 3. THE ENTRANCE SHALL BE MAINTAINED IN SUCH A CONDITION SUCH THAT IT PREVENTS MUD TRACKING OFF SITE. ADDITIONAL ROCK OR REPLACEMENT OF THE ENTRANCE MAY BE REQUIRED PERIODICALLY IF MUD STARTS TO TRACK OFF SITE.
- 4. THE ROCK ENTRANCE MAY BE REMOVED JUST PRIOR TO THE PLACEMENT OF AGGREGATE BASE.

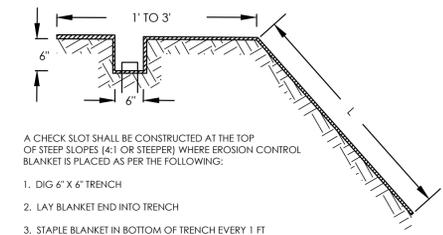
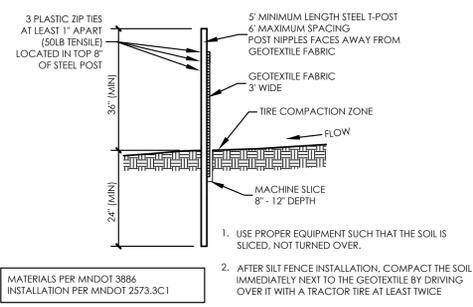
NOTE: PLACING FILTER FABRIC UNDER THE ROCK ENTRANCE MAY REDUCE THE AMOUNT OF MAINTENANCE IT WOULD REQUIRE.

1 TEMPORARY ROCK CONSTRUCTION ENTRANCE



- 1. BOTTOM OF CONCRETE WASHOUT AREA SHALL BE 10X10"
- 2. CONTRACTOR SHALL REMOVE WASH LIQUID FROM CONCRETE WASHOUT AREA AND DISPOSE OF PER MPCA REQUIREMENTS WHEN WASHOUT AREA BECOMES HALF FULL.
- 3. CONTRACTOR SHALL SELECT THE MOST OPTIMAL LOCATION FOR THE CONCRETE WASHOUT

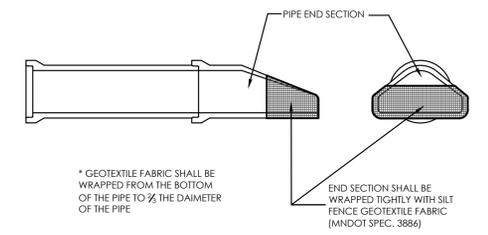
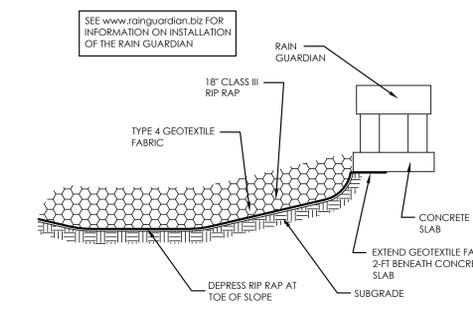
2 CONCRETE WASHOUT



- A CHECK SLOT SHALL BE CONSTRUCTED AT THE TOP OF STEEP SLOPES (4:1 OR STEEPER) WHERE EROSION CONTROL BLANKET IS PLACED AS PER THE FOLLOWING:
  - 1. DIG 6" X 6" TRENCH
  - 2. LAY BLANKET END INTO TRENCH
  - 3. STAPLE BLANKET IN BOTTOM OF TRENCH EVERY 1 FT
  - 4. BACKFILL TRENCH WITH SOIL AND COMPACT
  - 5. IF SLOPE LENGTH (L) IS GREATER THAN 100 FT DIG A CHECK SLOT 1/3 FROM THE BOTTOM OF THE SLOPE AND STAPLE THE BLANKET IN AS IN THE TOP TRENCH.

3 SILT FENCE (MACHINE SLICED)

4 EROSION CONTROL BLANKET



\* GEOTEXTILE FABRIC SHALL BE WRAPPED FROM THE BOTTOM OF THE PIPE TO 1/2 THE DIAMETER OF THE PIPE

5 RIP RAP AT RAIN GUARDIAN

6 CULVERT INLET PROTECTION

18005SWPPP-Plan.dwg



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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of the state of Minnesota

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NEW BUILDING

HANOVER DENTAL

HANOVER MINNESOTA

SCALE: 1" = 20'  
0 20 40

UTILITY & PAVING PLAN

C-102

**UTILITY AND SURFACING NOTES:**

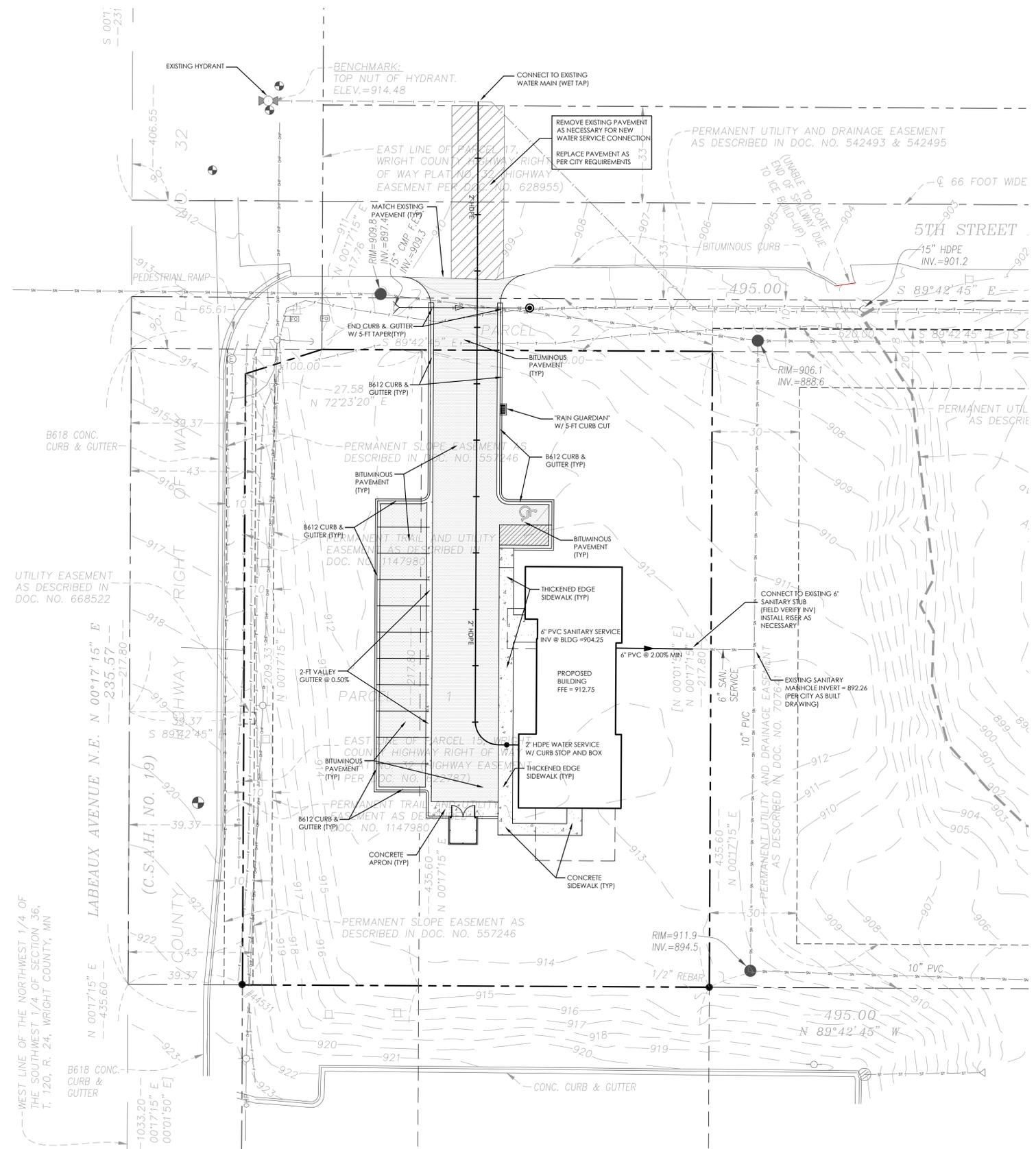
**WATER AND SANITARY SEWER UTILITIES**

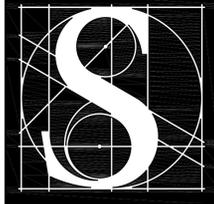
1. WATER MAIN AND ANY WATER SERVICE LINES SHALL BE PLACED AT A MINIMUM DEPTH OF 8 FEET BELOW FINISHED GRADE.
2. IF CONFLICTS ARE DISCOVERED WHERE WATER MAIN CROSSES EXISTING SANITARY SEWER SERVICE LINES, OR STORM SEWER, THE WATER MAIN SHALL BE RAISED OR LOWERED APPROPRIATELY WHILE STILL MAINTAINING A MINIMUM DEPTH OF 8 FEET BELOW FINISHED GRADE.
3. INSULATION SHALL BE PLACED AT ALL LOCATIONS WHERE STORM SEWER CROSSES SANITARY SEWER, WATER MAIN, OR ASSOCIATED SERVICES. INSULATION SHALL CONSIST OF AN 8-FT X 8-FT SQUARE OF 3"-THICK RIGID INSULATION. INSULATION SHALL BE PLACED BETWEEN THE STORM SEWER AND PIPE CROSSING WITH THE EDGES OF THE INSULATION PARALLEL TO THE PIPING AS MUCH AS POSSIBLE.
4. INSTALL SANITARY SEWER SERVICE LINE CLEANOUTS AS REQUIRED BY THE MINNESOTA PLUMBING CODE.
5. SEE SHEET C3 FOR STORM SEWER GRADING, AND SHEET C2 FOR MISCELLANEOUS DETAILS RELATING TO THE PLACEMENT OF THE UTILITIES.
6. CONTRACTOR SHALL VERIFY LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION.
7. PRIOR TO CONSTRUCTION OF SANITARY SEWER, AND ORDERING ASSOCIATED MATERIALS, THE CONTRACTOR'S PLUMBING DESIGNER SHALL PROVIDE THE ENGINEER WITH THE TOTAL DRAINAGE FIXTURE UNITS (DFU) FOR THE INTERIOR PLUMBING TO VERIFY THE CORRECT SIZING AND SLOPE OF THE SANITARY SEWER SERVICE.

**OWNER/CONTRACTOR SHALL OBTAIN A PLUMBING PERMIT FROM THE MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY PRIOR TO THE INSTALLATION OF ANY SANITARY SEWER OR WATER UTILITIES. CONSTRUCTION OF SANITARY SEWER OR WATER UTILITIES SHALL NOT COMMENCE UNTIL AFTER THE PLUMBING PERMIT HAS BEEN OBTAINED, AND ANY AND ALL PERTINENT COMMENTS HAVE BEEN ADDRESSED ON THE PLAN AND IN THE PROJECT SPECIFICATIONS.**

**SURFACING**

1. SUBGRADES SHALL BE SCARIFIED AND/OR COMPACTED AS NECESSARY TO ATTAIN THE REQUIRED COMPACTION DESCRIBED IN THE GENERAL NOTES (SHEET C1). TEST ROLLING OF THE SUBGRADE SHALL BE OBSERVED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN. LOCATIONS EXHIBITING EXCESSIVE RUTTING (PER MNDOT SPEC. 2111) SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER PRIOR TO THE PLACEMENT OF AGGREGATE BASE. COMPACTION TESTING IN UTILITY TRENCHES SHALL BE PERFORMED BY AN INDEPENDENT TESTING FIRM.
2. GRAVEL BASE COURSES SHALL BE ROLLED AND COMPACTED. TEST ROLLING OF THE GRAVEL BASE SHALL BE OBSERVED BY A SOILS ENGINEER TO VERIFY STABILITY.
3. ALL EXISTING BITUMINOUS OR CONCRETE EDGES, WHICH WILL ABUT NEW BITUMINOUS OR CONCRETE SURFACING SHALL BE SAWCUT TO OBTAIN A VERTICAL EDGE.
4. EXPANSION JOINTS SHALL BE PLACED AT ALL LOCATIONS WHERE NEW CONCRETE ABUTS EXISTING CONCRETE, AND AT ALL LOCATIONS WHERE SEPARATE CONCRETE POURS ABUT EACH OTHER.
5. SEE SHEET C1 FOR SPECIFICATIONS REGARDING THE CONSTRUCTION OF PAVEMENTS, AND CURB AND GUTTER.





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*C. L. Robertson*  
 Signature

C. L. ROBERTSON / 222715  
 Architect / Registration

2018.03.09  
 Date

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Revisions

1728  
 Project Number

NEW BUILDING  
 HANOVER  
 DENTAL

411 LABEAUX AVENUE NE  
 HANOVER  
 MINNESOTA

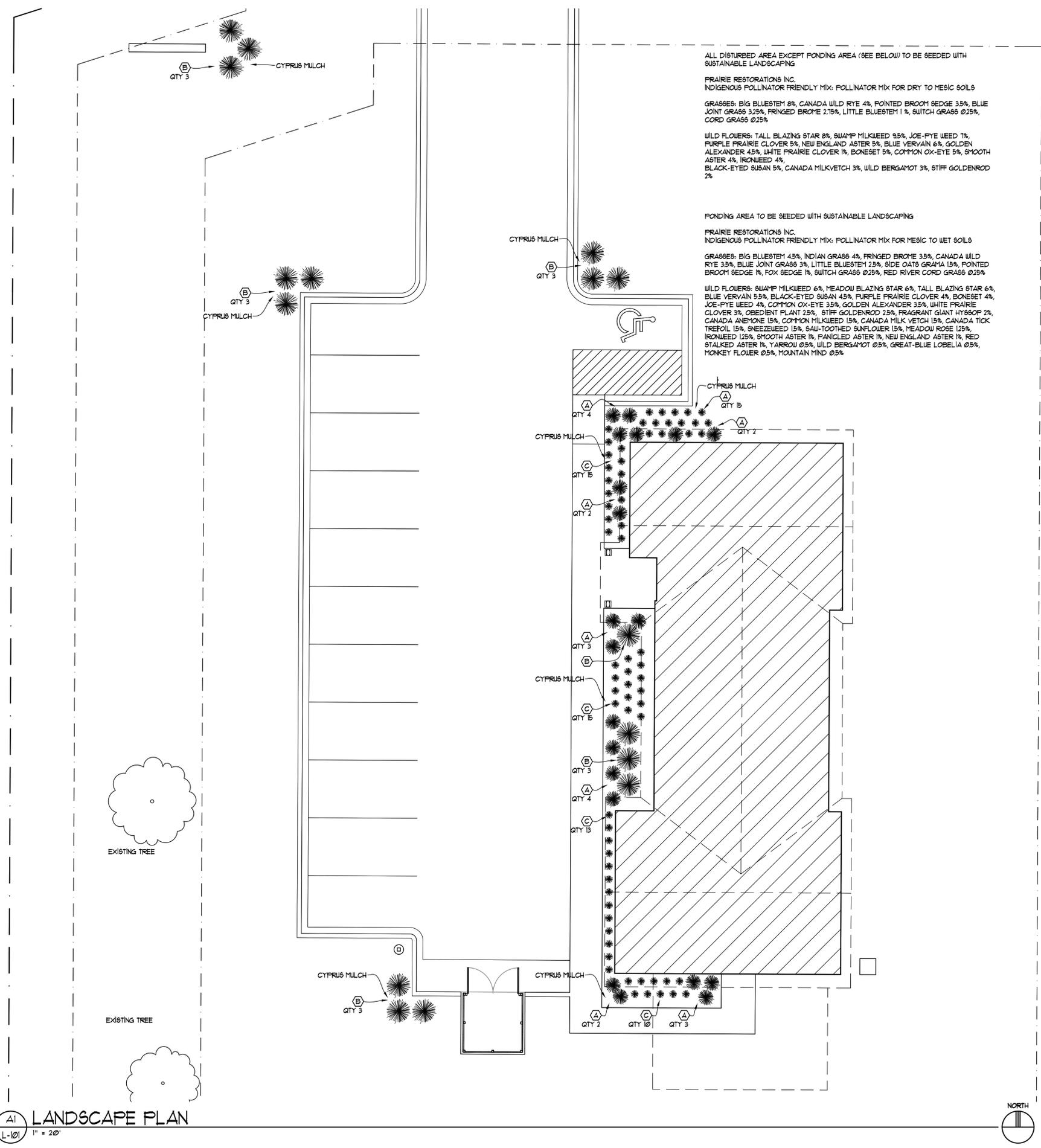
1" = 20'-0"

LANDSCAPE PLAN

L-101

PLANT SCHEDULE						
SYMBOL	COMMON NAME	BOTANICAL NAME	QUANTITY	SIZE	METHOD	REMARK
(A)	KARL FOERSTER	CALAMAGROSTIS ACUTIFOLIA	20	*3	CONTAINER	1
(B)	CHINESE SILVER GRASS	MISCANTHUS SINENSIS	16	*3	CONTAINER	1
(C)	LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	68	*1	CONTAINER	2

REMARKS:  
 1 FLANT 4" OC  
 2 FLANT 2" OC

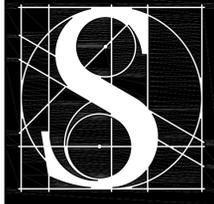


ALL DISTURBED AREA EXCEPT PONDING AREA (SEE BELOW) TO BE SEEDDED WITH SUSTAINABLE LANDSCAPING  
 PRAIRIE RESTORATIONS INC.  
 INDIGENOUS POLLINATOR FRIENDLY MIX: POLLINATOR MIX FOR DRY TO MESSIC SOILS  
 GRASSES: BIG BLUESTEM 8%, CANADA WILD RYE 4%, POINTED BROOM SEDGE 35%, BLUE JOINT GRASS 3.25%, FRINGED BROME 2.75%, LITTLE BLUESTEM 1%, SWITCH GRASS 0.25%, CORD GRASS 0.25%  
 WILD FLOWERS: TALL BLAZING STAR 8%, SWAMP MILKWEED 95%, JOE-PYE WEED 1%, PURPLE PRAIRIE CLOVER 5%, NEW ENGLAND ASTER 5%, BLUE VERVAIN 6%, GOLDEN ALEXANDER 45%, WHITE PRAIRIE CLOVER 1%, BONESET 5%, COMMON OX-EYE 5%, SMOOTH ASTER 4%, IRONWEED 4%, BLACK-EYED SUSAN 5%, CANADA MILKVETCH 3%, WILD BERGAMOT 3%, STIFF GOLDENROD 2%

PONDING AREA TO BE SEEDDED WITH SUSTAINABLE LANDSCAPING  
 PRAIRIE RESTORATIONS INC.  
 INDIGENOUS POLLINATOR FRIENDLY MIX: POLLINATOR MIX FOR MESSIC TO WET SOILS  
 GRASSES: BIG BLUESTEM 45%, INDIAN GRASS 4%, FRINGED BROME 35%, CANADA WILD RYE 35%, BLUE JOINT GRASS 3%, LITTLE BLUESTEM 25%, SIDE OATS GRAMA 15%, POINTED BROOM SEDGE 1%, FOX SEDGE 1%, SWITCH GRASS 0.25%, RED RIVER CORD GRASS 0.25%  
 WILD FLOWERS: SWAMP MILKWEED 6%, MEADOW BLAZING STAR 6%, TALL BLAZING STAR 6%, BLUE VERVAIN 5%, BLACK-EYED SUSAN 45%, PURPLE PRAIRIE CLOVER 4%, BONESET 4%, JOE-PYE WEED 4%, COMMON OX-EYE 35%, GOLDEN ALEXANDER 35%, WHITE PRAIRIE CLOVER 3%, OBEDIENT PLANT 25%, STIFF GOLDENROD 25%, FRAGRANT GIANT HYSSOP 2%, CANADA ANEMONE 15%, COMMON MILKWEED 15%, CANADA MILK VETCH 15%, CANADA TICK TREFOLI 15%, SNEEZEWEED 15%, SAW-TOOTHED SUNFLOWER 15%, MEADOW ROSE 125%, IRONWEED 125%, SMOOTH ASTER 1%, PANICLED ASTER 1%, NEW ENGLAND ASTER 1%, RED STALKED ASTER 1%, YARROW 0.5%, WILD BERGAMOT 0.5%, GREAT-BLUE LOBELIA 0.5%, MONKEY FLOWER 0.5%, MOUNTAIN MIND 0.5%

(A1) LANDSCAPE PLAN  
 L-101 1" = 20'





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**C. L. ROBERTSON / 22215**  
Architect / Registration

**2018.03.09**  
Date

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**CLR** Checked

Revisions

**1728**  
Project Number

**NEW BUILDING**  
**HANOVER**  
**DENTAL**

411 LABEAUX AVENUE NE  
**HANOVER**  
**MINNESOTA**

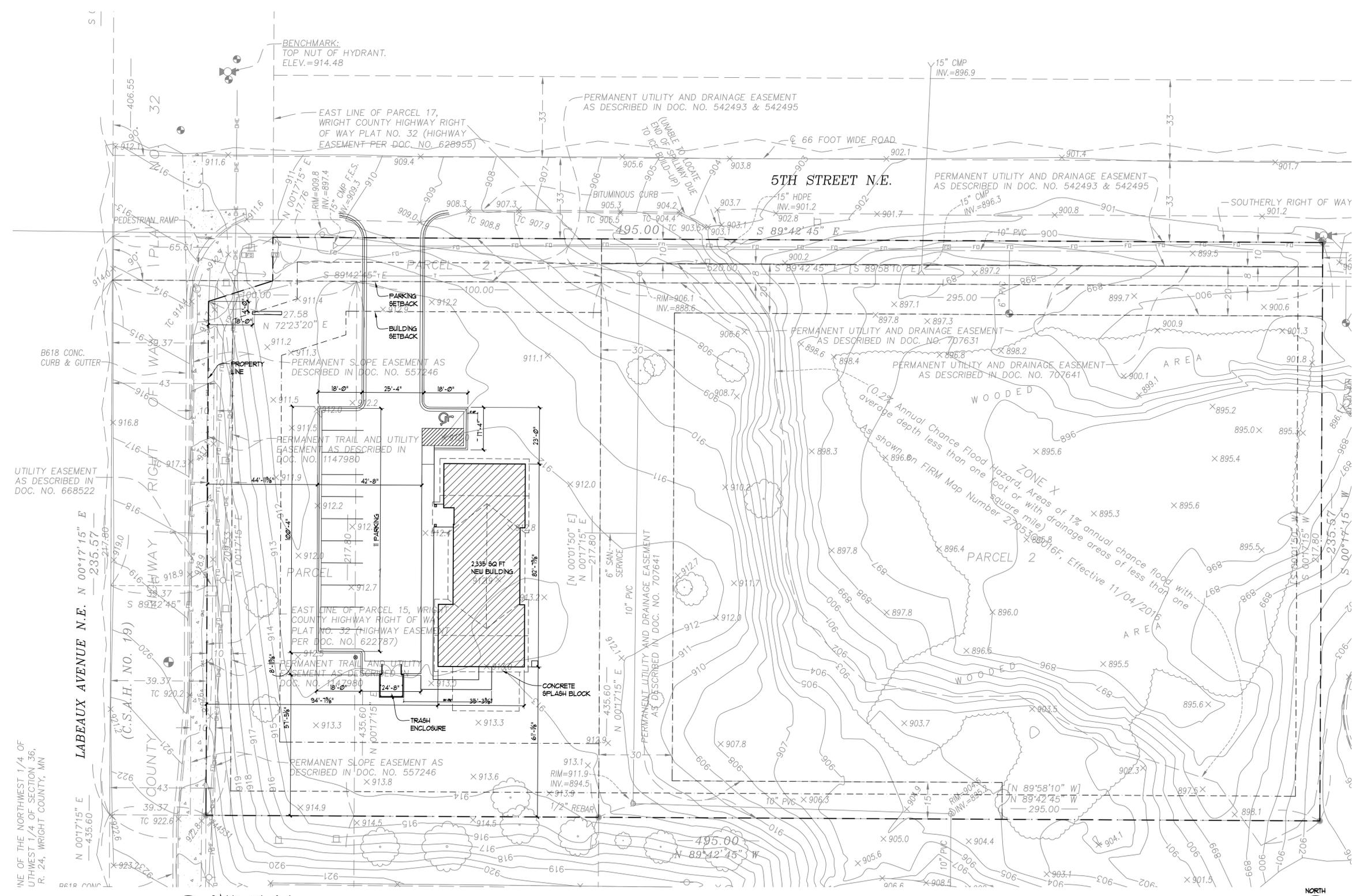
SITE PLAN

**AS101**

PARKING REQUIREMENTS 6 SPACES PER DR = 6 SPACES

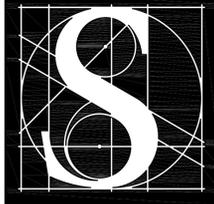
PARKING PROVIDED = 12 SPACES

SEE AS102 FOR ENLARGED SITE PLAN



**AI** **SITE PLAN**  
AS101 1" = 20'





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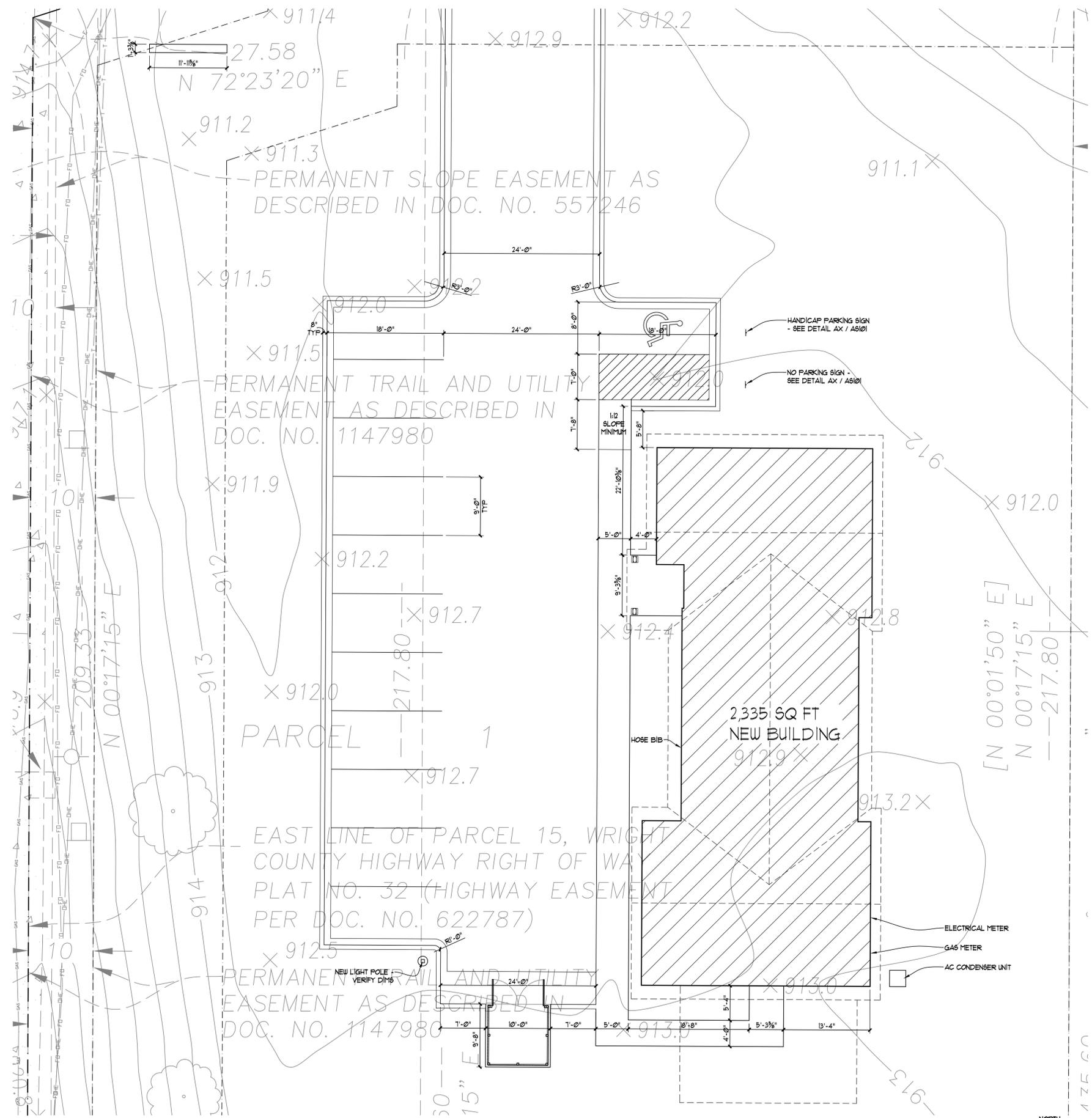
1728  
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 HANOVER  
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SITE PLAN

AS102



AI ENLARGED SITE PLAN  
 AS102 1/8" = 1'-0"



**PLAN NOTES:**

- 1 DIMENSIONS ON FLOOR PLANS ARE FROM FACE OF FRAMING OR GRID LINE
- 2 DIMENSIONS TO WALLS WITH RESILIENT CHANNELS ARE TO STUDS, NOT CHANNELS
- 3 DIMENSION ON HINGE SIDE OF DOOR JAMB IS 6" UNLESS NOTED OTHERWISE. OPENING IS DRAWN 2" WIDER THAN DOOR. FINISHED DIMENSION IS 6 1/2" FROM BUTT SIDE OF DOOR TO FACE OF ADJACENT WALL
- 4 PARTITIONS ARE TYPE "A" UNLESS NOTED OTHERWISE
- 5 DIMENSIONS NOTED AS "VERIFY" ARE THE LESS CRITICAL DIMENSIONS AND IDENTIFY THE LOCATION WHERE ADJUSTMENTS CAN BE MADE TO MATCH ACTUAL CONDITIONS
- 6 ANY ADJUSTMENTS TO DIMENSIONS SHALL BE APPROVED BY THE ARCHITECT
- 7 ALL ANGLED WALLS ARE 45° UNLESS NOTED OTHERWISE
- 8 BACKING FOR LARGE EQUIPMENT TO BE FASTENED TO 18 GA STUDS
- 9 ALL BACKING TO BE INSTALLED PRIOR TO INSTALLATION OF PLUMBING AND ELECTRICAL

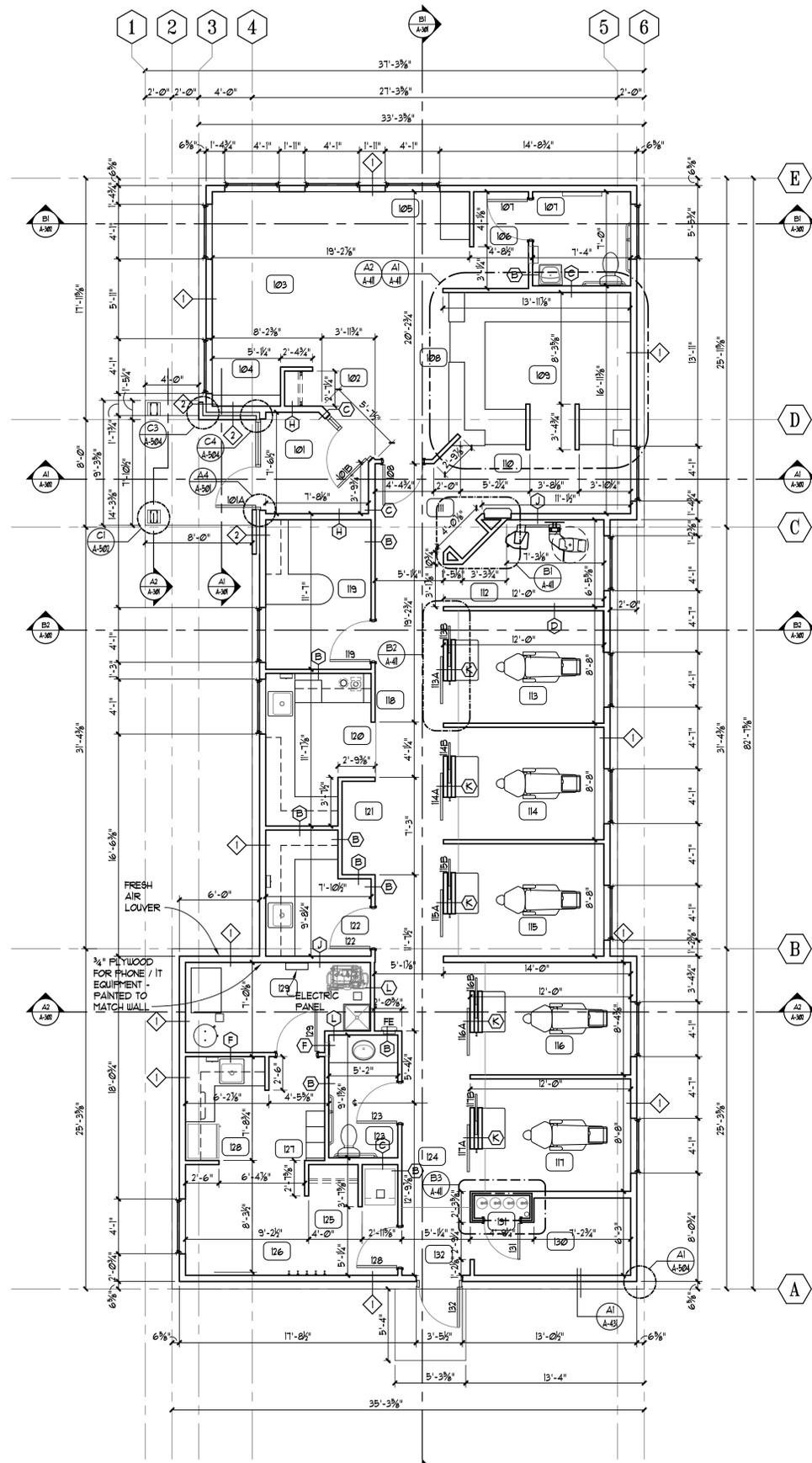
SEE SHEET A-101a FOR ELEVATION TAGS  
 SEE SHEET A-101a FOR ACCESSORY, EQUIPMENT, AND PLUMBING TAGS  
 SEE SHEET A-601 FOR WALL & PARTITION TYPES  
 SEE SHEET A-411 FOR ENLARGED PLANS

ROOM FINISH SCHEDULE							
ROOM #	ROOM NAME	FLOOR	BASE	WALLS	CEILING	CEILING HT	REMARKS
101	VESTIBULE	PT1	PT2	FNT 1	GYP BD	10' - 0"	
102	COATS	CPT 1	CPT 2	FNT 1	ACT 1	10' - 0"	
103	PATIENT LOUNGE	CPT 1	CPT 2	FNT 1	ACT 1	10' - 0"	
104	KID'S AREA	CPT 1	CPT 2	FNT 1 & 2	ACT 1	10' - 0"	
105	HOSPITALITY	CPT 1	CPT 2	FNT 1	ACT 1	10' - 0"	
106	HALL	CPT 1	CPT 2	FNT 1	ACT 1	9' - 0"	
107	TOILET ROOM	PT 1	PT 4	PT 1 & 2, FNT 1	ACT 1	9' - 0"	
108	RECEPTION	CPT 1	CPT 2	FNT 1	ACT 1	10' - 0"	
109	RECEPTIONIST	CPT 1	CPT 2	FNT 1 & 2	ACT 1	9' - 0"	
110	REAPPOINT	CPT 1	CPT 2	FNT 1 & 2	ACT 1	10' - 0"	
111	GOODBYE MIRROR / TOYS	CPT 1	CPT 2	FNT 1 & 2	ACT 1	10' - 0"	
112	PAN	CPT 1	CPT 2	FNT 1	ACT 1	8' - 0"	
113	TREATMENT	CPT 1	CPT 2	FNT 1	ACT 1	9' - 0"	
114	TREATMENT	CPT 1	CPT 2	FNT 1	ACT 1	9' - 0"	
115	TREATMENT	CPT 1	CPT 2	FNT 1	ACT 1	9' - 0"	
116	TREATMENT	CPT 1	CPT 2	FNT 1	ACT 1	9' - 0"	
117	TREATMENT	CPT 1	CPT 2	FNT 1	ACT 1	9' - 0"	
118	HALL	CPT 1	CPT 2	FNT 1	ACT 1	10' - 0"	
119	DOCTOR OFFICE	CPT 1	CPT 2	FNT 1	ACT 1	9' - 0"	
120	STERILE	VCT 1	VB 1	FNT 1 & 2	ACT 1	9' - 0"	
121	CART STORAGE	CPT 1	CPT 2	FNT 1 & 2	ACT 1	10' - 0"	
122	LAB	VCT 1	VB 1	FNT 1	ACT 1	8' - 0"	
123	TOILET ROOM	PT 1	PT 4	PT 1 & 2, FNT 1	ACT 1	8' - 0"	
124	HALL	CPT 1	CPT 2	FNT 1	ACT 1	10' - 0"	
125	LAUNDRY / GOWNS	VCT 1	VB 1	FNT 1	ACT 1	9' - 0"	
126	COAT HANGING	VCT 1	VB 1	FNT 1	ACT 1	9' - 0"	
127	STAFF LOCKERS	VCT 1	VB 1	FNT 1	ACT 1	9' - 0"	
128	STAFF LOUNGE	VCT 1	VB 1	FNT 1	ACT 1	9' - 0"	
129	MECHANICAL / UTILITY ROOM	CONC	VB 1	FNT 1	GYP BD	12' - 0"	
130	STORAGE	VCT 1	VB 1	FNT 1	ACT 1	8' - 0"	
131	GAS CLOSET	VCT 1	VB 1	FNT 1	GYP BD	12' - 0"	
132	STAFF ENTRY	VCT 1	VB 1	FNT 1	ACT 1	10' - 0"	

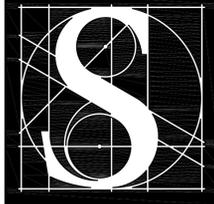
  

<b>KEY:</b>	ACT	ACOUSTIC CEILING TILE	GYP BD	GYP/SD BOARD
	CONC	FINISHED CONCRETE	FNT	PAINT
	CPT	CARPET	VCT	VINYL COMPOSITION TILE
	CT	CERAMIC TILE	VB	VINYL BASE

SEE FINISH MATERIALS SCHEDULE (SHEET A-131) FOR MORE INFORMATION ON FINISHES



**FLOOR PLAN**  
 3/16" = 1'-0"



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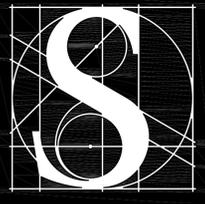
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**HANOVER**  
**DENTAL**

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**HANOVER**  
**MINNESOTA**

3/16" = 1'-0"

FLOOR PLAN  
 ROOM FINISH SCHEDULE

**A-101**



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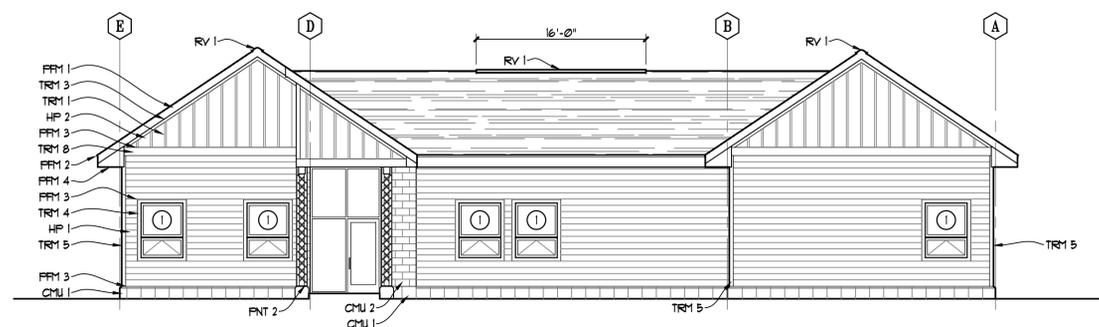
411 LABEAUX AVENUE NE

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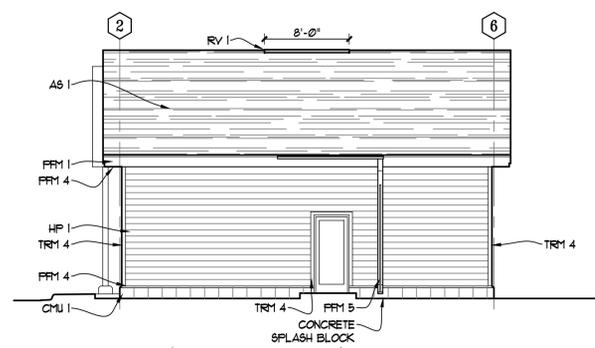
1/8" = 1'-0"

EXTERIOR ELEVATIONS  
 EXTERIOR FINISH SCHEDULE

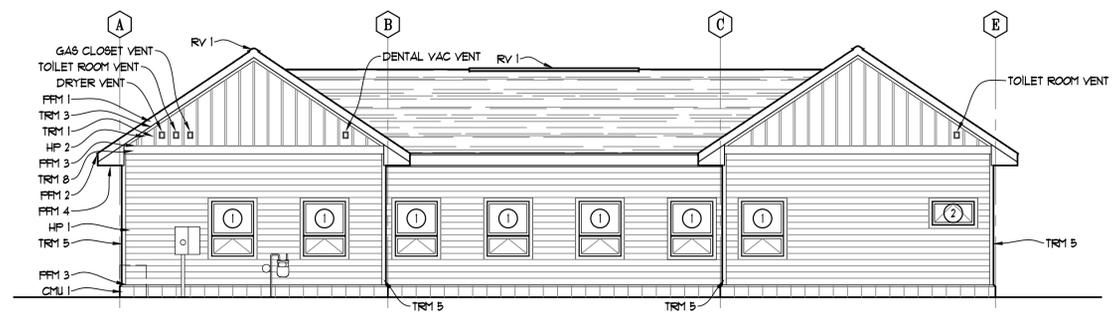
A-201



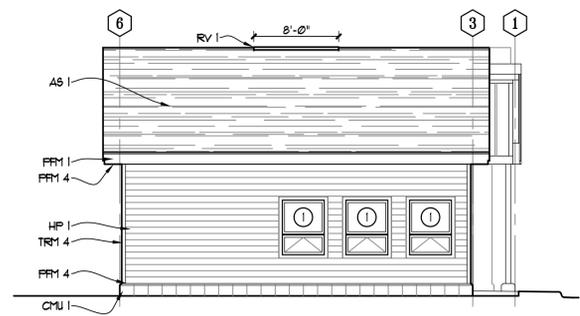
D1 EXTERIOR ELEVATION - WEST  
 A-201 1/8" = 1'-0"



C1 EXTERIOR ELEVATION - SOUTH  
 A-201 1/8" = 1'-0"



B1 EXTERIOR ELEVATION - EAST  
 A-201 1/8" = 1'-0"



A1 EXTERIOR ELEVATION - NORTH  
 A-201 1/8" = 1'-0"

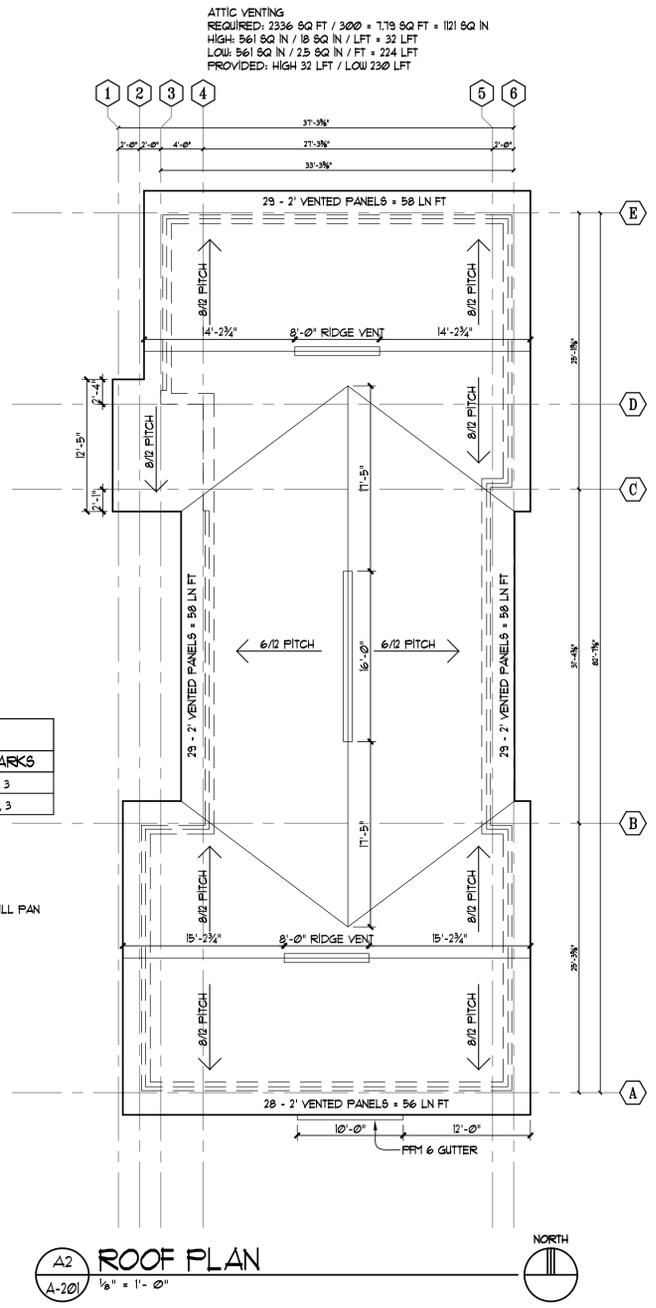
EXTERIOR FINISH SCHEDULE				
FINISH	ITEM	MANUFACTURER	COLOR	REMARKS
AS 1	ASPHALT SHINGLES HERITAGE PREMIUM	TANKO	RUSTIC BLACK	
CMU 1	4" CONCRETE MASONRY SILL UNIT 12552200000201	AMCON BLOCK	ONYX	
CMU 2	4" CONCRETE MASONRY UNIT BURNISHED	AMCON BLOCK	ONYX	
GRT 1	GROUT FRISH PIGMENTS	FRISH CORPORATION	FRISH F9140 SLATE GREY	
HP 1	HARDIEPLANK LAP SIDING SELECT CEDARFILL	JAMES HARDIE	BOOTHBAY BLUE	
HP 2	HARDIEPANEL VERTICAL SIDING SELECT CEDARFILL	JAMES HARDIE	LIGHT MIST	
FFM 1	FASCIA CLADDING	FIRESTONE UNA - CLAD	BONE WHITE	
FFM 2	DRIP EDGE	FIRESTONE UNA - CLAD	BONE WHITE	
FFM 4	FLASHING	FIRESTONE UNA - CLAD	BONE WHITE	
FFM 5	SOFFIT 8" UC-500 AND UC-500V	FIRESTONE UNA - CLAD	BONE WHITE	1
FFM 4	GUTTER 4"x3" BEVELED GUTTER	FIRESTONE UNA - CLAD	BONE WHITE	
PTX 1	EXTERIOR PAINT	SHERWIN WILLIAMS	SW 1007	
PTX 2	EXTERIOR PAINT	SHERWIN WILLIAMS	SW 1933	
RV 1	RIDGE VENT SHINGLEVENT II	AIR VENT INC	CHARCOAL	
TRE 1	1x6 TREX PLANK 6' LENGTHS	TREX	WINCHESTER GREY	
TRM 1	EXTERIOR COMPOSITE TRIM WOOD TEXTURE 3/4" x 2" ACTUAL	MIRATEC	PRIMED TO PAINT	2
TRM 2	EXTERIOR COMPOSITE TRIM SMOOTH 3/4" x 2" ACTUAL	MIRATEC	PTX 1	
TRM 3	EXTERIOR COMPOSITE TRIM SMOOTH 3/4" x 4" NOMINAL	MIRATEC	PTX 1	
TRM 4	EXTERIOR COMPOSITE TRIM SMOOTH 5/4" x 4" NOMINAL	MIRATEC	PTX 1	
TRM 5	EXTERIOR COMPOSITE TRIM SMOOTH 5/4" x 5" NOMINAL	MIRATEC	PTX 1	
TRM 6	EXTERIOR COMPOSITE TRIM SMOOTH 4/4" x 5" NOMINAL	MIRATEC	PTX 1	
TRM 7	EXTERIOR COMPOSITE TRIM SMOOTH 4/4" x 6" NOMINAL	MIRATEC	PTX 1	
TRM 8	EXTERIOR COMPOSITE TRIM SMOOTH 5/4" x 10" NOMINAL	MIRATEC	PTX 1	
TRM 9	EXTERIOR COMPOSITE TRIM SMOOTH 5/4" x 2" NOMINAL	MIRATEC	PTX 1	
WIN 1	WINDOW ALUMINUM CLAD	MARVIN	STONE WHITE	

NOTE:  
 CONTRACTOR SHALL SUBMIT SAMPLES OF THESE ITEMS FOR THE ARCHITECT'S REVIEW

REMARKS:  
 1 SEE REFLECTED CEILING PLAN A-111 FOR LOCATION OF VENTED SOFFITS  
 2 TO BE PAINTED TO MATCH HARDIEPANEL VERTICAL SIDING LIGHT MIST

WINDOW SCHEDULE					
WINDOW	MANUFACTURER	UNIT NUMBER	FRAME SIZE	ROUGH OPENING	REMARKS
1	MARVIN	CJUN4840 / CJUN4824	4'-0" X 5'-2 1/4"	4'-1" X 5'-3 1/2"	1, 3
2	MARVIN	CJUN4828	4'-0" X 2'-4"	4'-1" X 2'-5 1/4"	2, 3

REMARKS:  
 1 STATIONARY UPPER AND OPERATING LOWER GRAY TINTED LOW E II GLASS, CLADDING COLOR IS STONE WHITE  
 2 OPERATING WINDOW, GRAY TINTED LOW E II GLASS, CLADDING COLOR IS STONE WHITE  
 3 RO DIMENSIONS REFER TO STUD FRAMING AND ARE ADJUSTED FROM MANUFACTURER'S SUGGESTION TO ACCOMMODATE SLOPED SILL PAN DETAIL AS SHOWN



A2 ROOF PLAN  
 A-201 1/8" = 1'-0"



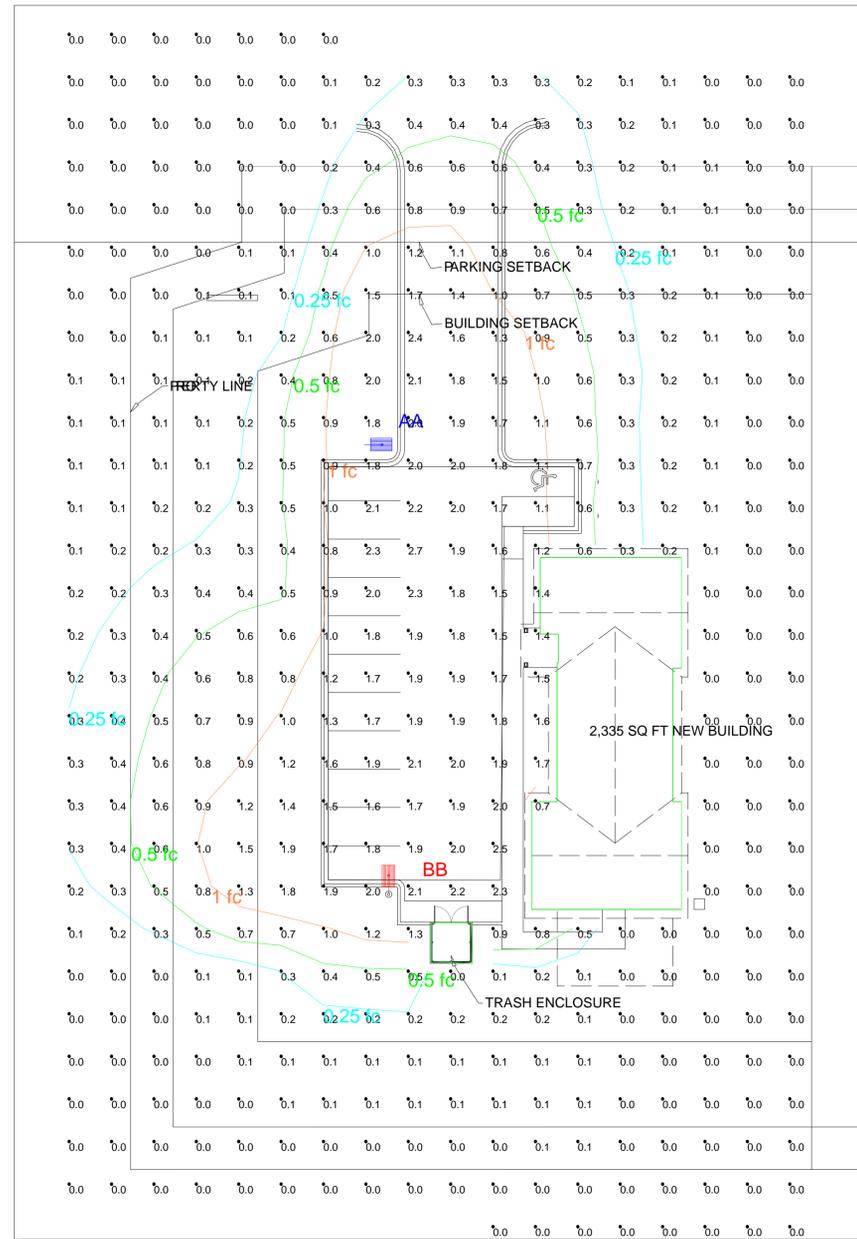
Luminaire Schedule							
Symbol	Qty	Label	Arrangement	LLF	Description	Arr. Watts	Lum. Lumens
	1	AA	SINGLE	0.900	LUMARK PRV-A40-D-UNV-T3-BZ MOUNT ON 25FT POLE WITH 30IN BASE	143	15203
	1	BB	SINGLE	0.900	LUMARK PRV-A40-D-UNV-T4-BZ MOUNT ON 25FT POLE WITH 30IN BASE	143	15157

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	
SITE GROUND	Illuminance	Fc	0.47	2.7	0.0	N.A.	N.A.	
PARKING	Illuminance	Fc	1.89	2.7	1.1	1.72	2.45	

Luminaire Location Summary						
LumNo	Label	X	Y	Z	Orient	Tilt
24	AA	-39.4	113.9	27.5	0	0
25	BB	-33.7	8.6	27.5	90	0



TYPE AA & BB



Plan View  
Scale: 1 inch= 20 Ft.

GENERAL NOTES:

A. PULSE PRODUCTS DOES NOT ASSUME RESPONSIBILITY FOR THE INTERPRETATION OF THIS CALCULATION OR COMPLIANCE TO THE LOCAL, STATE, OR FEDERAL LIGHTING CODES OR ORDINANCES.

B. LIGHTING LAYOUT IS NOT INTENDED FOR CONSTRUCTION DOCUMENTS BUT ONLY TO ILLUSTRATE THE PERFORMANCE OF THE PRODUCT.

C. ALL READINGS/CALCULATIONS SHOWN ARE SHOWN ON OBJECTS/SURFACES.



#	Date	Comments
Revisions		

Drawn By: SANDY  
Checked By: TRENT  
Date: 3/16/2018  
Scale: AS NOTED

HANOVER DENTAL