

**City of Carson City  
Agenda Report**

**Date Submitted:** March 24, 2009

**Agenda Date Requested:** April 2, 2009

**Time Requested:** 20 minutes

**To:** Mayor and Board of Supervisors

**From:** Public Works-Planning Division

**Subject Title:** Action to approve a request for a Tentative Subdivision Map from Voltaire Green Homes, LLC, for an 8-unit Common Open Space subdivision known as City View Greenhomes, located at 4500 and 4600 Voltaire Street, APNs 009-253-10 and 009-255-01. (TSM-09-003)

**Summary:** The request would result in eight single family residential units with approximately 30% open space (2.47 acres) on approximately 8.16 acres (including proposed abandonment AB-09-002) on property zoned Single Family One Acre (SF1A). This Common Open Space development request is being processed concurrently with AB-09-002.

**Type of Action Requested:**

Resolution

Ordinance

Formal Action/Motion

Other (Specify)

**Does This Action Require A Business Impact Statement:**  Yes  No

**Planning Commission Action:** Recommended approval at the February 25, 2009 meeting by a vote of 6 Ayes, 0 Nays and 1 Abstain.

**Recommended Board Action:** I move to approve a request for a Tentative Subdivision Map from Voltaire Green Homes, LLC, for an 8-unit Common Open Space subdivision known as City View Greenhomes, located at 4500 and 4600 Voltaire Street, APNs 009-253-10 and 009-255-01, based on the findings and subject to the conditions of approval contained in the staff report.

**Explanation for Recommended Board Action:** With the recommended conditions of approval, the tentative subdivision meets all the city requirements of the Subdivision Ordinance. Therefore, the Planning Commission and staff recommend that the Board of Supervisors approve the Tentative Subdivision Map. See attached Planning Commission staff report for more information.

**Applicable Statute, Code, Policy, Rule or Regulation:** CCMC 17.05 (Tentative Maps), 18.02.050 (Review).

**Fiscal Impact:** N/A

**Explanation of Impact:** N/A

**Funding Source:** N/A

**Alternatives:** 1) Refer back to staff and Planning Commission for further review  
2) Deny request

**Supporting Material:** 1) Maps

**Prepared By:** Janice Brod, Management Assistant V

<b>Reviewed By:</b> _____	Date: _____
(Planning Division Director)	
_____	Date: _____
(Public Works Director)	
_____	Date: _____
(City Manager)	
_____	Date: _____
(District Attorney's Office)	

**Board Action Taken:**

Motion: _____	1) _____	Aye/Nay
	2) _____	_____
		_____
		_____
		_____

\_\_\_\_\_  
(Vote Recorded By)

**STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF FEBRUARY 25, 2009**

**FILE NO: TSM-09-003**

**AGENDA ITEM : H-5b**

**STAFF AUTHOR:** Jennifer Pruitt, Principal Planner

**REQUEST:** A Tentative Subdivision Map for a Common Open Space Development - "City View Greenhomes," consisting of eight single family dwelling units and 30% open space (2.47 acres) on approximately 8.16 acres (including proposed abandonment AB-09-002) on property zoned Single Family One Acre (SF1A), located at 4500 and 4600 Voltaire Street, APN(s) 009-253-10 and 009-255-01.

**APPLICANT:** Voltaire Green Homes LLC

**OWNERS:** Benjamin & Maureen Saljestad

**LOCATION:** 4500 and 4600 Voltaire Street

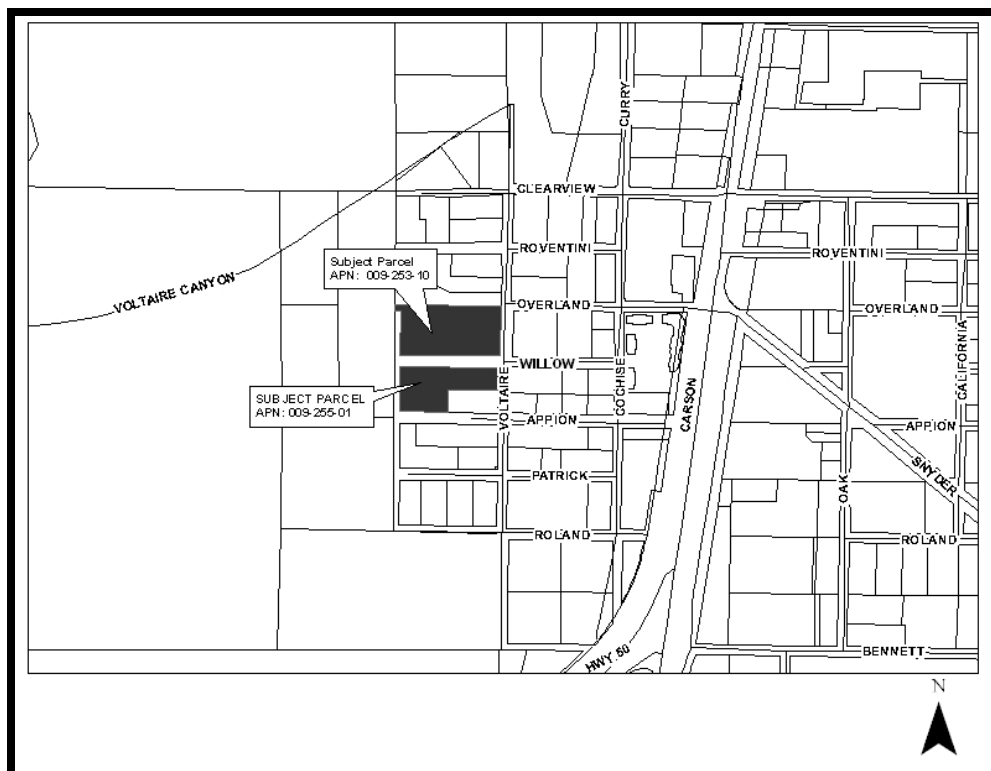
**APN(s):** 009-253-10 and 009-255-01

**Master Plan:** Low Density Residential (LDR)

**Zoning:** Single Family One Acre (SF1A)

**RECOMMENDED MOTION:**

**"I move to recommend to the Board of Supervisors approval of a Tentative Subdivision Map known as City View Greenhomes, (TSM-09-003) to allow a Common Open Space Development of eight residential home lots, on property zoned Single Family One Acre (SF1A), located at 4500 and 4600 Voltaire Street, Assessor's Parcel Number(s) 009-253-10 and 009-255-01 based on required findings and subject to the recommended conditions of approval contained in the staff report."**



## **TENTATIVE SUBDIVISION MAP RECOMMENDED CONDITIONS OF APPROVAL.**

1. The applicant must sign and return the Notice of Decision / conditions of approval within 10 days of receipt of notification. If the Notice of Decision is not signed and returned within 10 days, the item may be rescheduled for the next Planning Commission meeting for further consideration.
2. Prior to submittal of any parcel map or preferably final map, the Engineering Division shall approve all on-site and off-site improvements. The applicant shall provide construction plans to the Engineering Division for all required on-site and off-site improvements, prior to any submittals for approval of a final map. The plan must adhere to the recommendations contained in the project soils and geotechnical report.
3. All other departments' conditions of approval, which are attached, shall be incorporated as conditions of this report.
4. The applicant shall adhere to all Carson City standards and requirements for water and sewer systems, grading and drainage, and street improvements, as outlined in the Development Standards and other applicable Divisions and as required by the Standard Specifications and Details for Public Works Construction, as adopted by Carson City. No deviations from the standards are allowed unless specifically noted on the approved tentative map.
5. Please be advised that inclusion under the Nevada Division of Environmental Protection Construction Stormwater General Permit is also required for any project involving land disturbances of one or more acres.

### **The following shall be included in the design of the improvement plans:**

6. West Appion Way, as shown on Phase 2 of the tentative map, shall be improved to local rural road standards in accordance with Carson City standard detail C-1.12. The horizontal layout and finish grades of the proposed turn-around at the west terminus of West Appion Way shall be approved by the Fire Department.
7. In accordance with Carson City Development Standards (CCDS) 12.10 and 12.11.10, pavement sections shall be based on subgrade strength values determined by Resistance (R) Value or California Bearing Ratio (CBR). Refer to CCDS Division 17 for soils report requirements. In no case shall the proposed pavement section be less than the minimum section prescribed in standard drawing C-1.12.
8. Storm drainage facility improvements shall be designed in accordance with CCDS Division 14. A Technical Drainage Study is required with submittal of Improvement Plans in accordance with CCDS 14.9 through 14.10.
9. Storm drainage improvements along the west side of Voltaire Street will be required in order to convey runoff from West Appion Way to the existing inlet in front of lot 2. The existing "V-Ditch" along Voltaire Street will be insufficient to convey this runoff. The most likely solution would be a piped storm drain system.

10. All lots shall be served by public sanitary sewer. The Engineering Division has reviewed plans from BSA Construction for a sewer main extension from the intersection of West Overland Street and Cochise Street to the intersection of West Appion Way and Voltaire Street. The existing house on lot 1 shall be connected to the public sewer as part of the Phase 1 subdivision improvements. The Phase 2 subdivision improvements will include a sewer main extension to the western terminus of West Appion Way in order to serve lots 6, 7 and 8.
11. All lots shall be served by public water. Lots 1 through 5 will connect to the existing water main in Voltaire Street. The Phase 2 subdivision improvements will include a water main extension to the western terminus of West Appion Way in order to serve lots 6, 7 and 8.
12. Future development of the individual lots will require adherence to the Hillside Development requirements within Division 7 of the Carson City Development Standards. Engineered grading, drainage, erosion control and re-vegetation plans will be required for each individual lot building permit. Maximum allowable driveway slope will be 12%.
13. All driveway approaches shall be constructed with Type II base and have an asphalt paving or concrete surface from the edge of traveled way to the property line in accordance with Carson City Municipal Code 11.12.060.
14. An adequate area shall be provided at the top of each driveway in order to allow vehicles to back out of the garage and turn around in accordance with CCDS 12.12.2. The suggested minimum dimension is 12' by 12'.

**The following shall be conditions to be completed prior to submitting for Construction Permit or Final Map:**

15. Final improvement plans for the development shall be prepared in accordance with CCDS Division 19 and the Standard Specifications and Details for Public Works Construction, as adopted by Carson City.
16. The applicant shall obtain dust control and stormwater pollution prevention permits from the Nevada Division of Environmental Protection (NDEP). The site grading must incorporate proper dust and erosion control measures.
17. Recordation of AB-09-002 is required to be completed prior to submitting for a Construction Permit or a Final Map.

**The following must be submitted or included with the final subdivision map:**

18. All Parcel Maps or preferably final map(s) shall be in substantial accord with the approved Tentative Map and the approved Tentative Map as signed by the Mayor, Planning Commission Chairman and the Planning Director.

19. Notes shall be added to the final map:
  - A. "These parcels are subject to Carson City's Growth Management Ordinance and all property owners shall comply with provisions of said ordinance."
  - B. "All development shall be in accord with Tentative Map (TSM-09-003)."
20. All street names shall be reviewed and approved by Carson City's GIS Department. The approved names shall be shown on the final map.
21. A copy of the signed Notice of Decision shall be provided.
22. With the submittal of any parcel map or preferably final maps, the applicant shall provide evidence to the Planning Division from the Health and Fire Departments indicating the agencies' concerns or requirements have been satisfied. Said correspondence shall be included in the submittal package for any parcel map or preferably final maps and shall include approval by the Fire Department of all hydrant locations.

**The following are applicable to Building Plan Submittal:**

23. The plans submitted for review shall comply with the prescriptive requirements found in the Carson City Building Division handout titled: RESIDENTIAL PLAN SUBMITTAL REQUIREMENTS: One & Two Family Dwellings and Accessory Structures. This hand out may also be found online at: [www.carson-city.nv.us/Index.aspx?page=181](http://www.carson-city.nv.us/Index.aspx?page=181)
24. Please contact the Carson City Building Division if the developer wishes to create mastered plans for this project.
25. The Foundation Plans, prepared as a part of the future building plans, shall indicate the requirements for concrete exposure to sulfates in the soil. ('06 IBC 1904.3)
26. The plan submittal for the proposed single-family dwellings shall include a topographical site plan, with care given to the placement of the homes in relationship to the neighboring ascending and descending slopes. ('06 IBC 1805.3)
27. As a part of the plan submittal, include a minimum of two (02) copies of the International Code Council Evaluation Services Report (ICC ESR) for the weatherproof membrane at the second story decks.
28. Provide a minimum of two (02) copies of the International Code Council Evaluation Services Report (ICC ESR) for the exterior plastering ("stucco") system. In addition, on the building elevation plan sheet, indicate the exterior plastering ("stucco") system manufacturer and product name/number, along with the ICC ESR number.
29. As a part of the building design, include a dimensioned detail for the separation between the weep screed and earth, and between the weep screed and hard surfaces. ('06 IBC 2512.1.2)

**The following are general conditions of approval:**

30. All disturbed areas are required to have a palliative applied for dust control. Any and all grading will comply with State and City regulations.
31. Project requires application for a Building Permit, issued through the Carson City Building Division. This will necessitate a complete review of the project to verify compliance with all adopted construction codes and municipal ordinances applicable to the scope of the project.
32. Hours of construction will be limited to 7:00 a.m. to 7:00 p.m., Monday through Friday, and 7:00 a.m. to 5:00 p.m. on Saturday and Sunday. If the hours of construction are not adhered to, the Building Division will issue a warning for the first violation, and upon a second violation, will have the ability to cause work at the site to cease immediately.
33. A final map, prepared in accordance with the tentative map, for the entire area for which the tentative map has been approved or the first of a series of final maps covering a portion of the approved tentative map must be approved by the Board for recording within two years after the approval of a tentative map unless a longer time is provided for in an approved development agreement with the City. If the subdivider elects to present a successive map in a series of phased final maps, the successive final map must be approved by the Board within one year of the recording of the preceding final map. The Board may grant an extension of not more than one year for any successive final map after the one-year period for presenting a successive final map has expired.
34. The applicant shall retain a qualified consultant to prepare a Fuel Management Plan and must submit the plan prior to final map approval. Enforcement of the Fuel Management Plan shall be required of the Homes Owners Association, Landscape Maintenance District or legal instrument acceptable to the City. The Fuels Management Plan shall include provisions for Defensible Space, Community Defense Zones, Defensible Fuel Profile Zone identification, fire lanes and fuel breaks, as required by the City. The final version of the plan shall be subject to review and approval by the Carson City Fire Department and Planning Division.
35. The applicant shall be required to comply with all codes and ordinances regulated by the Fire Department.
36. Prior to the recordation of the final map for any phase of the project, the improvements associated with said phase must either be constructed and approved by the City, or the specific performance of said work secured by providing the City with a proper surety in the amount of one hundred fifty percent (150 %) of the engineer's estimate. In either case, upon acceptance of the improvements by the City, the developer shall provide the City with a proper surety in the amount of ten percent (10 %) of the engineer's estimate to secure the Developers obligation to repair defects in workmanship and materials which may appear in the work within one year of acceptance by the City.
37. A "will serve" letter from the water and wastewater utilities shall be provided to the Nevada Health Division prior to approval of a final map.

38. The District Attorney shall approve any CC&R's prior to recordation of the first final map, including but not limited to the following:
39. Exterior building colors shall blend with surrounding development and not cause abrupt changes. Primary building surfaces (excluding trim areas) should be muted or earth-tone in color. Bold colors shall be avoided except when used as accent or trim.
40. Three-Year Maintenance Plan. Provisions shall be made to monitor and maintain, for a period of three (3) years regardless of ownership, a maintenance plan for the common open space area. The maintenance plan for the common open space area shall, at a minimum, address the following:
  - a. Vegetation management;
  - b. Watershed management;
  - c. Debris and litter removal;
  - d. Fire access and suppression;
  - e. Maintenance of public access and/or maintenance of limitations to public access;
  - f. Other factors deemed necessary by the Commission or the Board.
41. Provisions shall be made for the permanent preservation and ongoing maintenance of the common open space and other common areas using a legal instrument acceptable to the City.
42. Snow removal within City View Greenhomes Subdivision will be the responsibility of the residents and will not be performed by Carson City.
43. Application TSM-09-003 is subject to the approval of application AB-09-002.
44. All development shall be in compliance with Carson City Development Standards Division 7, Hillside Development, as the average slope of the area to be developed is in excess of 15%.
45. The maximum number of residential lots is eight for City View Greenhomes Subdivision (not including open space lots).
46. Lots not planned for immediate development shall be left undisturbed and no mass grading and clearing of natural vegetation shall be allowed.

**LEGAL REQUIREMENTS:** CCMC 17.05 (Tentative maps); 17.10 (Common Open Space Development); NRS 278.330; CCMC 18.02.050 (Review); 18.04.055 (Single Family One Acre district); and 18.04.190 (Residential Districts Intensity and Dimensional Standards);



**KEY ISSUES:** Does the proposal meet the Tentative Map requirements? Will the proposal cause material damage to surrounding land uses or properties?

### **SURROUNDING ZONING AND LAND USE INFORMATION**

NORTH: Single Family One Acre, Residential  
SOUTH: Single Family One Acre, Residential  
WEST: Single Family One Acre, vacant  
EAST: Single Family One Acre, Residential

### **ENVIRONMENTAL INFORMATION**

1. FLOOD ZONE: Zone D (An area where flood hazards have not been determined)
2. SLOPE/DRAINAGE: The natural ground slope is nearly uniform across the site down to the east-southeast at an average slope of approximately 29%.
3. SOILS:  
    No. 60: Surprise, 8%-15% slopes  
    No. 70. Toll 0%-15% slopes
4. SEISMIC ZONE: II & III (least severity of shaking potential);

### **SITE DEVELOPMENT INFORMATION**

1. SUBJECT AREA: 6.93 acres
2. ABANDONMENT AREA: 1.23 acres
3. TOTAL RESIDENTIAL LOTS: eight residential lots
4. TOTAL PROJECT SITE AREA: 8.16 acres
5. COMMON AREA/OPEN SPACE AREA 2.47 acres
6. EXISTING LAND USE: The subject site is primarily vacant; however APN 009-255-01 was recently developed with a single family dwelling unit.
7. PROPOSED UNIT SIZES: 2,300 square feet to 3,140 square feet
8. PROPOSED LOT SIZES 21,060 square feet to 39,125 square feet
9. REQUIRED SETBACKS: See proposed building envelopes.
10. PARKING REQUIRED: 16 parking spaces -two spaces per dwelling unit
11. PARKING PROVIDED: 16-24 parking spaces - eight dwelling units with attached two car garages, most with three car garages.

12. **BUILDING HEIGHT:** The proposed homes project notes varying building heights ranging from two stories to three stories in height, not to exceed the maximum building height of 32 feet in compliance with SF1A zoning requirements.
13. **PROJECT PHASING:** City View Greenhomes Subdivision is proposed with two phases. Phase I includes site development and lot development of Lots 1-5. Phase II includes site development and lot development of Lots 6-8.

CCMC 17.10.030 Lot and Yard Standards allow for the minimum lot size, lot width and setback requirements applicable to the base zoning district may be reduced for better utilization of the land and to produce a housing environment of stable and desirable character consistent with the objectives of Chapter 17.10 Common Open Space Development. The proposed lot and yard standards of the City View Greenhomes development are in keeping with the criteria noted in CCMC 17.10.030.

## **BACKGROUND**

September 08, 2008, the applicant, Ben Smith, Voltaire Green Homes LLC. and City staff participated in a Conceptual Review (CSM-08-090) for the proposed City View Greenhomes subdivision. The original proposal consisted of eight single-family home sites.

February 17, 2009, the applicant conducted a neighborhood open house with property owners surrounding the proposed development site to display the draft plans and solicit comments and or concerns. Per the information provided by the applicant there were approximately 14+ adjacent property owners in attendance at the neighborhood open house, information was provided to those in attendance and tours of the nearly completed single family dwelling unit on site were conducted.

## **DISCUSSION**

The purpose of CCMC 17.10 Common Open Space Development is to set forth regulations to permit variation of lot size, including density transfer (cluster) subdivisions, in order to preserve or provide open space, protect natural, cultural and scenic resources, achieve a more efficient use of land, minimize road building and encourage stable, cohesive neighborhoods offering a mix of housing types. Common open space development may be allowed in any residential zoning district.

The proposed Common Open Space Development, City View Greenhomes, is located at 4500 and 4600 Voltaire Street, APN(s) 009-253-10 and 009-255-01, within the southwestern portion of Carson City. The subject parcels are located on the west side of Voltaire Street and just north of West Appion Way. The developed area will consist of approximately 8.16 acres. Open space and common area combined will consist of approximately 2.47 acres (30% of the proposed City View Greenhomes subdivision).

The City View Greenhomes Open Space Development (TSM-09-003) is being processed concurrently with Right-of-Way Abandonment AB-09-002.

The subject site is currently two parcels: APN 009-253-10, which is 4.14 acres and APN 009-255-01, which is 2.78 acres. The overall acreage including the proposed Abandonment AB-09-

002 is 8.16 acres. The site is primarily undeveloped; however, there is a recently constructed single family dwelling unit on site. A majority of the subject site is covered with native sage and scrub brush and has topographical changes exceeding 15%-30%.

The proposed City View Greenhomes subdivision does not exceed the total number of dwelling units allowed by the underlying zoning district (SF1A) which allows a maximum of eight total residential units on the 8.16 acre site. At this time the developer is proposing a residential tentative subdivision map creating eight lots, consisting of a defined 8.16 acre area for homes and a defined area for Common open space. The residential units are proposed at two to three story units that will not exceed the maximum building height of 32 feet.

Mitigation of development effects on this hillside property will be accomplished through the common open space development process that allows the applicant an opportunity to cluster the home development into areas on the subject site that are not as steep on site and preserve areas greater than 33% slope for open spaces. The course of action for the proposed development will include the use of stepped foundations that contour the homes to the existing topography, the use of rockery walls to blend the areas of earth retaining into the existing landscape as well as the use of native species and drought resistant landscaping to reduce the water consumption, which will help the homes blend into the environment. Per the applicant the proposed development will also mitigate and repair an existing highly visible scar that was created decades ago due to mass excavation on the hillside for the use on a western movie set "The Shootist" in downtown Carson City in 1976 starring John Wayne.

The City View Greenhomes project is dedicated to green building through the incorporation of a certified green builder (BSA Construction) and commitment to certifying the single family dwelling units to Energy Star and Sierra Green building guidelines for certification. Per the applicant, every aspect of the proposed project considers green practices from the minimal impact development of the site, to the high energy efficient home construction, to the landscape design. If approved, City View Greenhomes subdivision will be the first "Green Subdivision" in Carson City history.

Green building is the practice of increasing the efficiency with which buildings use resources — energy, water, and materials—while reducing building impacts on human health and the environment during the building's life cycle, through better siting, design, construction, operation, maintenance, and removal.

Green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water, and other resources
- Protecting occupant health and improving employee productivity
- Reducing waste, pollution and environmental degradation

### **Hillside Development Standards**

The proposed development will be required to meet the standards identified in the Hillside Development Standards, Division 7 as noted in condition of approval #44. The standards and requirements of Division 7, Hillside Development and CCMC 18.08 Hillside Development are designed to minimize the potential of hillside development that could cause or contribute to

landslides, erosion, sedimentation, deforestation, flooding and/or the aesthetic degradation of the City's natural environment.

Development of skylines and hilltops as designated on the Carson City skyline area map must be carefully regulated and strongly discouraged. The applicant must explore every opportunity to construct below the skyline area. The subject site is not located in the Carson City Skyline area, the steep topographic nature of the subject site warrant compliance with hillside development standards as noted above.

### **Open Space, Parks, Trails and Pathways**

The required open space pursuant to CCMC 17.10 shall be a minimum of 250 square feet per dwelling unit. The applicant is proposing 13,500 square feet of open space per dwelling unit. The proposed open space for the City View Greenhomes development is 2.47 acres and will consist of natural vegetation as well as additional landscaping to provide more attractiveness on site. The open space area proposed is 30% of the 8.16 acres site and is a key component to the proposed development. The applicant has incorporated open space and pathways easements within the proposed development.

### **Access**

Primary access to the proposed City View Greenhomes subdivision, Phase One. Lots 1-5 will be provided from Voltaire Street. The proposed access to Phase Two, Lots 6-8 will be from the access from West Appion Way.

### **Drainage**

A Preliminary Drainage Report prepared by BSA Consulting has been provided regarding City View Greenhomes development dated January 2009. Construction of each residence will include on-site detention of run-off to insure post development run-off equal to pre-development conditions for the design storm event. There are no defined drainage paths across the subject site. The proposed site development will not result in an increase for the five year 24 hour event from pre-development conditions and can be conveyed by the existing drop inlet and culvert in Voltaire Street if properly maintained.

Per the geotechnical report prepared by Terracon Consulting Engineers & Scientists dated July 31, 2008, the native site soils appear suitable for the proposed construction based on geotechnical conditions encountered in the exploratory borings.

### **Fire Mitigation and Fuels Management Plan**

The applicant has provided in the Tentative Map submittal a Fuels Management Plan for the City View Greenhomes development. This plan addresses the current site characteristics, fuel management, access, water supply and fire sprinklers systems, building construction and fuel material storage. The applicant shall retain a qualified consultant to prepare a Fuel Management Plan and must submit the plan prior to final map approval. Enforcement of the Fuel Management Plan shall be required of the Home Owners Association or legal instrument acceptable to the City. The Fuels Management Plan shall include provisions for defensible space, Community Defense Zones, Defensible Fuel Profile Zone identification, fire lanes and

fuel breaks, as required by the City. The final version of the plan shall be subject to review and approval by the Carson City Fire Department and Planning Division.

With the recommended conditions of approval, the findings to grant approval have been met by the applicant. The Planning Division staff is in support of this Tentative Map application. It is recommended that the Planning Commission make the recommendation to the Board of Supervisors, for approval of TSM-09-003 based on the required findings as noted on pages 15-19 of this staff report.

**PUBLIC COMMENTS:** Public notices were mailed on February 06, 2009 to 31 adjacent property owners within 515 feet of the subject site pursuant to the provisions of NRS and CCMC. As of February 18, 2009, no written comments have been submitted in favor or opposed to the proposed development. Any comments that are received after this report is completed will be submitted prior to or at the Planning Commission meeting, depending on their submittal date to the Planning Division.

**OTHER CITY DEPARTMENT OR OUTSIDE AGENCY COMMENTS:** Comments were received from various city departments. Recommendations have been incorporated into the recommended conditions of approval, where applicable.

**The Carson City Engineering Division** had a number of comments that are included in the conditions and attached with their memo.

**The Carson City Parks and Recreation Department:**

1. This project will be subject to the Residential Construction Tax.
2. The site is adjacent to the wilderness interface area; however, it has not been sought for acquisition by the Open Space Advisory Committee. Approximately five years ago, the Open Space Advisory Committee considered privately held lands immediately to the west where a single-family home is located on top of a hill. The Open Space Committee voted not to enter into negotiations towards the purchase of these lands further to the west and; therefore, it would not make sense to pursue the acquisition of these lands.
3. The Unified Pathways Master Plan calls for the dedication and development of off-street unpaved double-track trail. The applicant has shown in the map a proposed four-foot wide gravel pathway within a 50-foot access pathway easement. Staff would recommend that the four-foot wide gravel pathway not be constructed since it does not connect to any other existing facility and just serves one edge of the north property line to the edge of the south property line. Staff welcomes the 50-foot access pathway easement proposed with this map that will be used in the future for the development of a trail.
4. The site is located in the vicinity of Voltaire Canyon Road which is located to the north and has been designated by the U.S. Forest Service and Carson City as an authorized motorized route to various locations behind C-Hill and connecting to the Borda Meadows and Kings Canyon Road.

5. For the applicant's information, the closest parks for the subdivision are Ross Gold Park located to the east across U.S. Highway 395 and the Fairgrounds and Fuji Park complex located to the south.

**State of Nevada, Division of Environmental Protection:**

1. The Nevada Division of Environmental Protection (NDEP) has reviewed the City View Greenhomes subdivision map. Based upon this review, NDEP recommends approval of said subdivision with respect to water pollution control, sewage disposal, water quality and water supply facilities. This approval is based upon plans submitted to NDEP for community water supply and wastewater service to the referenced subdivision.
2. Please be advised that inclusion under the Nevada Division of Environmental Protection Construction Storm-water General Permit is also required for any project involving land disturbances of one or more acres. If the above referenced subdivision falls in this category, a storm-water authorization letter must be obtained from this Division prior to commencement of land-disturbing activities at the site. To apply for permit coverage, a Notice of Intent must be submitted along with a \$200.00 filing fee. For further details regarding this requirement, please contact Mr. Steve McGoff of NDEP at (775) 687-9429.

**State of Nevada, Division of Water Resources:**

1. The tentative map indicates that the source of water is to be from Carson City Utilities. To-date, no letter has been received by this office indicating that there is sufficient water for the subject subdivision.
2. Recommend tentative disapproval to the water quality as required by statutes for City View Greenhomes based on water service from Carson City utilizes, until such time that written notification addressed to the office is received listing the water permit(s) for the water purveyor with an indication that it has both sufficient uncommitted water rights and developed water source capacity to serve the proposed subdivision.

**Carson City School District Transportation Department:**

1. Transportation would be provided to Bordewich Elementary, Carson Middle School and Carson High School from this area, as these bus stops are located on the corner of Clearview Dr. and Cochise St.
2. As enrollment increases, funds for staffing, materials and other costs are made available through the State of Nevada per pupil funding allocations. The 2008-09 allotment is approximately \$4,800 per pupil.
3. Bordewich Elementary School will be able to accommodate these students. Carson Middle School and Carson High School will be able to accommodate these students.

### **The Carson City Fire Department:**

1. The applicant shall retain a qualified consultant to prepare a Fuel Management Plan and must submit the plan prior to final map approval. The Fuels Management Plan shall include provisions for Defensible Space, Community Defense Zones, Defensible Fuel Profile Zone identification, fire lanes and fuel breaks, as required by the City. The final version of the plan shall be subject to review and approval by the Carson City Fire Department and Planning Division.
2. A fire hydrant will be required at corner of West Appion Way and two driveways.
3. All other concerns were addressed during application review.

### **The Carson City Health Department:**

- Carson City Health and Human Services has no comments regarding the project as described in the packet received. The applicant must meet all applicable codes and ordinances as they apply to this request.

### **The Carson City Building Division:**

***These comments do not constitute a complete plan review, but are merely observations based on the information provided. The comments do not reflect all submittal requirements necessary for this project, but are those requirements that have generated concerns with similar projects in the past.***

#### **General**

1. Project requires application for a Building Permit, issued through the Carson City Building Division. This will necessitate a complete review of the project to verify compliance with all adopted construction codes and municipal ordinances applicable to the scope of the project.

#### **Site Development Plan Submittal**

2. The plans submitted for creation of the subdivision shall comply with the prescriptive requirements found in the Carson City Building Division handout titled: *Commercial Submittal Requirements*. This handout may also be found online at: [www.carson-city.nv.us/Index.aspx?page=181](http://www.carson-city.nv.us/Index.aspx?page=181)
3. The Geotechnical Report, submitted as a part of the creation of the subdivision, shall comply with the following:
  - a. Shall show compliance with the currently adopted version of the International Building Code (IBC)

- b. The Geotechnical Report for the proposed location shall include a complete assessment of the potential consequences of any liquefaction and soil strength loss, including estimation of differential settlement, lateral movement or reduction in foundation soil-bearing capacity, and shall address mitigation measures. ('06 IBC 1802.2 & 1802.2.7 #2)
4. As a part of the site development plan submittal, include a minimum of two (02) completed *Carson City Special Inspection & Testing Agreements* for the placement of fill to create the building pads.
5. Rockery retaining walls or rockery soil stabilization walls shall not be subject to surcharges, such as building foundations, adjacent retaining structures, slopes or vehicle surcharge (except parking lots and private driveways). Rockery walls over four (4) feet in (exposed) height shall be engineered and shall have structural observation. ('06 IBC 1806.1, as amended)
6. The submittal shall include two (02) copies of the Carson City Building Division *Special Inspection & Testing Agreement*, with original signatures. This is required for the material review and inspection of the structural fill placement by an approved third party Special Inspection Agency.

Comments Applicable To Building Plan Submittal

7. The plans submitted for review shall comply with the prescriptive requirements found in the Carson City Building Division handout titled: *RESIDENTIAL PLAN SUBMITTAL REQUIREMENTS: One & Two Family Dwellings and Accessory Structures*. This handout may also be found online at: [www.carson-city.nv.us/Index.aspx?page=181](http://www.carson-city.nv.us/Index.aspx?page=181)
8. Please contact Mr. Don Wilkins, with the Carson City Building Division, if the developer wishes to create mastered plans for this project.
9. The Foundation Plans, prepared as a part of the future building plans, shall indicate the requirements for concrete exposure to sulfates in the soil. ('06 IBC 1904.3)
10. The plan submittal for the proposed single-family dwellings shall include a topographical site plan, with care given to the placement of the homes in relationship to the neighboring ascending and descending slopes. ('06 IBC 1805.3)
11. As a part of the plan submittal, include a minimum of two (02) copies of the International Code Council Evaluation Services Report (*ICC ESR*) for the weatherproof membrane at the second story decks.
12. Provide a minimum of two (02) copies of the International Code Council Evaluation Services Report (*ICC ESR*) for the exterior plastering ("stucco") system. In addition, on the building elevation plan sheet, indicate the exterior plastering ("stucco") system manufacturer and product name/number, along with the ICC ESR number.



13. As a part of the building design, include a dimensioned detail for the separation between the weep screed and earth, and between the weep screed and hard surfaces. ('06 IBC 2512.1.2)

#### **TENTATIVE MAP FINDINGS:**

Staff recommends approval of the Tentative Subdivision Map based on the findings below and in the information contained in the attached reports and documents, pursuant to CCMC 17.05 (Tentative Maps); 17.07 (Findings) and NRS 278.349, subject to the recommended conditions of approval, and further substantiated by the applicant's written justification. This development was reviewed under the guidelines of CCMC Title 17, specifically Section 17.01.010. The design, improvement and maps of subdivisions are governed by the Planning and Zoning Act (Chapter 278 and 278A of Nevada Revised Statutes, hereinafter referred to as "NRS"), NRS 116, so far as is applicable, and the provisions of this title. The purposes of this title are to safeguard the public health, safety and general welfare by establishing certain additional standards of design, improvement, survey and development of subdivisions hereafter platted in Carson City in order to provide and insure the orderly and proper growth and development thereof.

1. **The project complies with applicable environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, water supply, and sewage disposal.**

*The development is required to comply with all applicable environmental and health laws concerning water and air pollution and disposal of solid waste. The development will be served by the Carson City Community Water System and the Carson City Wastewater Collection System.*

*The applicant has met with City staff regarding the connections of sewer and water.*

2. **Adequate water that meets applicable health standards is available in sufficient quantity to serve the subdivision.**

*As indicated in the Engineering Division's analysis of the application, water supplied to the development will meet applicable health standards. Neither Carson City's water supply nor wastewater treatment capacity will be exceeded by final approval of the proposed development.*

3. **Adequate utilities are available and accessible to serve the subdivision.**

*The applicant shall adhere to all Carson City standards and requirements for water and sewer systems, grading and drainage, and street improvements, as outlined in the Development Standards and other applicable Divisions and as required by the Standard Specifications and Details for Public Works Construction, as adopted by Carson City.*

*All other utilities are available in the area to serve the proposed development.*

- 4. Adequate public services such as schools, police protection, transportation, recreation and parks are available and accessible to serve the subdivision, including adequate availability and accessibility of water and services for the prevention and containment of fires.**

*Transportation would be provided to Bordewich Elementary, Carson Middle School and Carson High School from this area, as these bus stops are located on the corner of Clearview Drive and Cochise Street.*

*As enrollment increases, funds for staffing, materials and other costs are made available through the State of Nevada per pupil funding allocations, the 2008-09 allotment is approximately \$4,800 per pupil.*

*Bordewich Elementary School will be able to accommodate these students. Carson Middle School and Carson High School will be able to accommodate these students.*

*The applicant shall retain a qualified consultant to prepare a Fuel Management Plan and must submit the plan prior to final map approval. Enforcement of the Fuel Management Plan shall be required of the Homes Owners Association or legal instrument acceptable to the City.*

*A fire hydrant will be required at corner of West Appion Way and two driveways.*

- 5. Adequate access to public lands is provided where the proposed subdivision is adjacent to public lands.**

*The proposed subdivision is not located adjacent to public lands.*

*The site is adjacent to the wilderness interface area; however, it has not been sought for acquisition by the Open Space Advisory Committee. Approximately, five years ago, the Open Space Advisory Committee considered privately held lands immediately to the west where a single-family home is located on top of a hill. The Open Space Committee voted not to enter negotiations towards the purchase of these lands further to the west; therefore, it would not make sense to pursue the acquisition of these lands.*

- 6. The subdivision conforms with the zoning ordinance and master plan.**

*The proposed development is in keeping with the purpose statement of the Single Family 2 Acre (SF2A), 1 Acre (SF1A) and 21,000 (SF21) Residential Districts:*

- The purpose of the SF1A, SF2A and SF21 Districts are to provide for the development of low-density, large lot, single family detached residential units. The SF1A, SF2A and SF21 Districts are consistent with the policies of the Suburban Residential category of the Master Plan.*

*As noted above, the applicant is **not** seeking to develop the subject site with an increase of density other than the density currently allowed with the underlying zoning. Single family dwelling units are primary permitted use within the underlying zoning district of Single Family One Acre.*

The proposed development is in keeping with the purpose statement of the Common Open Space Development Title 17.10.005:

- The purpose of this Chapter is to set forth regulations to permit variation of lot size, including density transfer (cluster) subdivisions, in order to preserve or provide open space, protect natural, cultural and scenic resources, achieve a more efficient use of land, minimize road building and encourage stable, cohesive neighborhoods offering a mix of housing types.

The proposal **is in conformance with the Master Plan** and will be in conformance with the Zoning Ordinance (Title 18). The proposal is consistent with a number of goals and policies that support a diverse community with multiple opportunities for housing.

**7. The subdivision generally conforms with the City's Streets and Transportation Element.**

Prior to submittal of any final map or parcel maps, Development Engineering shall approve ***all*** on-site improvements which are to be in conformance with the City's Streets and Transportation Element of the City's Master Plan.

**8. The subdivision will have little or no detrimental effect on vehicular or pedestrian traffic and adequate public streets are provided to serve the subdivision.**

In general, the proposed development will not cause adverse impacts to the existing street system, per City Engineer, Jeff Sharp.

An adequate area shall be provided at the top of each driveway in order to allow vehicles to back out of the garage and turn around in accordance with CCDS 12.12.2. The suggested minimum dimension is 12 feet by 12 feet.

The existing Voltaire Street is currently built to local rural road standards, consistent with the Carson City Transportation Plan.

**9. The subdivision will have little or no detrimental effect on physical characteristics of the land such as flood plain, earthquake faults, slope, and soil.**

The physical characteristics of the area do not preclude the development as proposed. No portion of the property lies within FEMA mapped 100 or 500 year floodplains. Proposed grading of individual lots will occur on existing slopes steeper than 15%, therefore, will be subject to the Hillside Development requirements of Division 7 of the Carson City Development Standards.

A preliminary Drainage Report prepared by BSA Consulting has been provided regarding City View Greenhomes development dated January 2009. Construction of each residence will include on-site detention of run-off to insure post development run-off equal to pre-development conditions for the design storm event. There are no defined drainage paths across the subject site. The proposed site development will not result in an increase for the five year 24 hour event from pre-development conditions and can be conveyed by the existing drop inlet and culvert in Voltaire Street if properly maintained.

*Per the geotechnical report prepared by Terracon Consulting Engineers & Scientists dated July 31, 2008, the native site soils appear suitable for the proposed construction based on geotechnical conditions encountered in the exploratory borings.*

**10. The recommendations of applicable State agencies and the School District have been incorporated into the conditions of approval.**

*The requirements of Nevada Division of Environmental Protection (NDEP) have been incorporated into this staff report. The applicant must comply with all State agency requirements prior to approval of the final subdivision map.*

*Transportation would be provided to Bordewich Elementary, Carson Middle School and Carson High School from this area, as these bus stops are located on the corner of Clearview Dr. and Cochise St.*

*As enrollment increases, funds for staffing, materials and other costs are made available through the State of Nevada per pupil funding allocations, the 2008-09 allotment is approximately \$4,800 per pupil.*

*Bordewich Elementary School will be able to accommodate these students. Carson Middle School and Carson High School will be able to accommodate these students.*

**11. Existing and/or proposed recreation and trail easements are adequate to serve the proposed development.**

*The City View Greenhomes development will assist in the improving and expanding of the Carson City Trails Network as identified on the Carson City Unified Pathways Master Plan adopted March of 2006 by the Carson City Board of Supervisors.*

*The City View Greenhomes development trails and pathways have been designed to enhance and encourage pedestrian connectivity that allows the users to enjoy Carson City's natural setting.*

*The site is located in the vicinity of Voltaire Canyon Road which is located to the north and has been designated by the U.S. Forest Service and Carson City as an authorized motorized route to various locations behind C-Hill and connecting to the Borda Meadows and Kings Canyon Road.*

*The Unified Pathways Master Plan calls for the dedication and development of off-street unpaved double-track trail. The applicant has shown in the map a proposed four-foot wide gravel pathway within a 50-foot access pathway easement. Staff would recommend that the four-foot wide gravel pathway not be constructed since it does not connect to any other existing facility and just serves one edge of the north property line to the edge of the south property line. Staff welcomes the 50-foot access pathway easement proposed with this map that will be used in the future for the development of a trail.*

**12. All codes and regulations requirements of the Carson City Fire Department.**

*The applicant shall retain a qualified consultant to prepare a Fuel Management Plan and must submit the plan prior to final map approval. Enforcement of the Fuel Management Plan shall be required of the Homes Owners Association or legal instrument acceptable to the City. The Fuels Management Plan shall include provisions for Defensible Space, Community Defense Zones, Defensible Fuel Profile Zone identification, fire lanes and fuel breaks, as required by the City. The final version of the plan shall be subject to review and approval by the Carson City Fire Department and Planning Division.*

*A fire hydrant will be required at corner of West Appion Way and two driveways. The applicant shall be required to comply with all codes and ordinances regulated by the Fire Department.*

Respectfully submitted,  
PUBLIC WORKS DEPARTMENT, PLANNING DIVISION

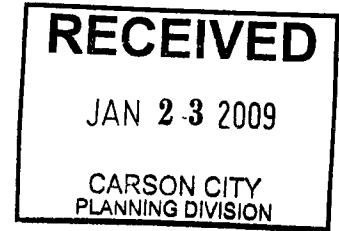
*Jennifer Pruitt*

Jennifer Pruitt, AICP, LEED AP  
Principal Planner

Attachments

- Application (TSM-09-003)
- State of Nevada, Division of Water Resources
- State of Nevada, Division of Environmental Protection
- Carson City School District comments
- Carson City Fire Department comments
- Carson City Health Department comments
- Carson City Building Division
- Carson City Parks and Recreation comments
- Engineering Division comments

**NRS 278.349(3) addressed**  
**City View Green Homes Subdivision**



**NRS 278.349(3)**

3. The governing body, or planning commission if it is authorized to take final action on a tentative map, shall consider:

- (a) Environmental and health laws and regulations concerning water and air pollution, the disposal of solid waste, facilities to supply water, community or public sewage disposal and, where applicable, individual systems for sewage disposal;

The homes proposed for this subdivision will be designed and built based on environmentally sound practices with regard to air and water pollution. Any and all fireplaces used in the homes will be of a type that will not emit pollutants. Landscapes and plumbing will be designed using low impact design techniques and therefore will not contribute any water pollution. Community water and sewage disposal will be utilized.

- (b) The availability of water, which meets applicable health standards and is sufficient in quantity for the reasonably foreseeable needs of the subdivision;

Community water service will be utilized for this project. The density of the project is not being increased, above the underlying zoning. There were no water quantity issues addressed in the Conceptual Review meeting on September 8, 2008.

- (c) The availability and accessibility of utilities;

The availability and accessibility of utilities is as follows:

Overhead electrical runs North and South along the West side of Voltaire St. New electrical to lots will be underground.

Existing water service main runs North and South along Voltaire St. New service will be connected as needed on the first phase of development with an extension to the main line to be installed in conjunction with the W. Appion Way extension at the final phase of development.

A planned extension to the sewer line from Overland St., West to Voltaire St. and then South along Voltaire St. is designed and is currently being reviewed by the city building department. This will provide availability to the first phase with an extension to the line to be installed in conjunction with the W. Appion Way extension at the final phase of development.

- (d) The availability and accessibility of public services such as schools, police protection, transportation, recreation and parks;

Carson City School District will provide bus transportation to Bordewich Elementary, Carson Middle School and Carson High School.

The current planned extension of W. Appion Way from the East to Voltaire St. will provide better police and transportation accessibility and the incorporation of access and pathway easements to the development will enhance the recreation availability.

(e) Conformity with the zoning ordinances and master plan, except that if any existing zoning ordinance is inconsistent with the master plan, the zoning ordinance takes precedence;  
The development conforms to the zoning ordinances and the master plan.

(f) General conformity with the governing body's master plan of streets and highways;  
The development is in conformity with the master plan of streets and highways.

(g) The effect of the proposed subdivision on existing public streets and the need for new streets or highways to serve the subdivision;  
There will be a minimal increase in automobile traffic and there are no new streets or highways needed to serve the development.

(h) Physical characteristics of the land such as floodplain, slope and soil;  
The development is located in an area which slopes to a degree that requires the approval of the tentative map to allow the lots to be reduced in size while retaining the underlying zoning. This provides for a more compact development while increasing the amount of open space area in the subdivision.

(i) The recommendations and comments of those entities and persons reviewing the tentative map pursuant to NRS 278.330 to 278.3485, inclusive; and  
There has been a Conceptual Review for this project and has the support of the Carson City Planning Department, Engineering Department, Fire Department, Health Department and the Carson City School district.

(j) The availability and accessibility of fire protection, including, but not limited to, the availability and accessibility of water and services for the prevention and containment of fires, including fires in wild lands.

There is an existing fire hydrant on Voltaire St. approx. 65 ft. South of the intersection with W. Willow St. providing available and accessible water for fire containment.  
The construction of the homes will be based on fire resistant materials and a Fuels Management Plan has been prepared addressing wild land fire issues.

## **Abandonment Request & Justification**

### **City View Green Homes Subdivision**

#### **Request for Abandonment**

The portion of West Willow Street Right-of-Way west of Voltaire Street. 600' L. x 60' W.

The 30' W. Right-of-Way extending from the West end of West Appion Way North approx. 568' to the North West corner of the subject property.

#### **Justification**

Carson City Development Standards 7.9.12 forbids road construction on natural slopes in excess of 15%. The portion of West Willow Street has an average slope of approx. 31%. The West half of W. Appion Way which provides access to the 30' W. ROW has an average slope of 33%.

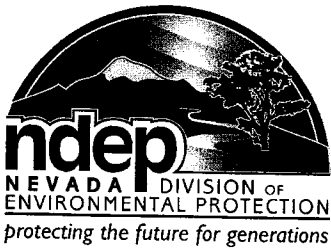
The request for abandonment is being made for the purpose of developing the site and providing an aesthetically pleasing subdivision that will incorporate energy efficient, sustainable homes along with open space to provide access and pathway easements, which will enhance the recreational opportunities in the area.

The properties adjacent to the W. Willow Street ROW will be combined, with approval of the abandonment, and will not be damaged. The 30' W. ROW along the West property boundary will be designated as an access / pathway easement within the subdivision and will enhance the private conservation area to the West.

The public will not be materially injured by the abandonment since the ROW roads are not constructed and cannot be constructed per the development standards. There is no access being provided to any public spaces by the existence on the ROW's, therefore non-is being removed.

By granting these abandonment's, the opportunity to develop this area becomes possible.





STATE OF NEVADA  
Department of Conservation & Natural Resources  
DIVISION OF ENVIRONMENTAL PROTECTION

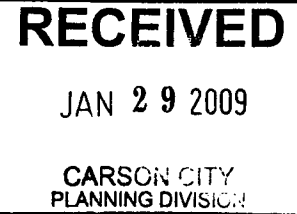
Jim Gibbons, Governor

Allen Biaggi, Director

Leo M. Drozdoff, P.E., Administrator

January 27, 2009

WALTER A. SULLIVAN  
COMMUNITY DEVELOPMENT DEPARTMENT  
2621 NORTHGATE LANE SUITE 62  
CARSON CITY NV 89701



**Re: Tentative Map-City View Greenhomes  
8 lots in Carson City**

Dear Mr. SULLIVAN:

The Nevada Division of Environmental Protection (NDEP) has reviewed the above referenced subdivision map. Based upon this review, NDEP recommends approval of said subdivision with respect to water pollution control, sewage disposal, water quality and water supply facilities. This approval is based upon plans submitted to NDEP for community water supply and wastewater service to the referenced subdivision.

Please be advised that inclusion under the Nevada Division of Environmental Protection Construction Stormwater General Permit is also required for any project involving land disturbances of one or more acres. If the above-referenced subdivision falls in this category, a stormwater authorization letter must be obtained from this Division prior to commencement of land-disturbing activities at the site. To apply for permit coverage, a Notice of Intent must be submitted along with a \$200 filing fee. For further details regarding this requirement, please contact Mr. Steve McGoff of NDEP at (775) 687-9429.

Sincerely,

Steve McGoff, P.E.

Technical Services Branch  
Bureau of Water Pollution Control

cc:

JIM BALDERSON, P.E. Nevada Division of Environmental Protection, Bureau of Safe Drinking Water, 901 S. STEWART ST. CARSON CITY 89701

LARRY KENNEDY Carson City, , 901 S. STEWART ST. CARSON CITY, NV 89701

Engineer: BSA CONSULTING LLC 123 W Nye Lane Ste 709 Carson City, NV 89706

Developer Name: VOLTAIRE GREENHOMES LLC PO BOX 291 Dayton, NV 89402

Control No. 8752





**DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
DIVISION OF WATER RESOURCES**

901 South Stewart Street, Suite 2002

Carson City, Nevada 89701-5250

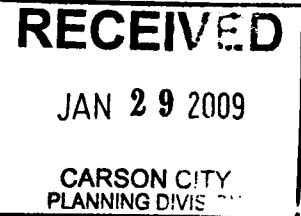
(775) 684-2800 • Fax (775) 684-2811

(800) 992-0900 x 2400

(In Nevada Only)

<http://water.nv.gov>

January 27, 2009



**Subdivision      Review No. 20643-T**

**To:** Carson City  
2621 Northgate Lane, Suite 62  
Carson City, Nevada 89706

**Name:** City View Greenhomes

**County:** Carson City –intersection of West Appion Way and Voltaire Street

**Location:** NW¼ NE¼ Section 31, Township 15 North, Range 20 East, M.D.M.

**Plat:** Tentative map and review fee received January 20, 2009 for 8 lots.

**Owner:** Benjamin C. and Maureen Seljestad  
1547 Truckee Drive  
Carson City, Nevada 89706

**Developer:** Voltaire Green Homes, LLC  
P. O. Box 291  
Dayton, Nevada 89403

**Engineer:** BSA Consulting, LLC  
123 West Nye Lane, Suite 709  
Carson City, Nevada 89706

**Water Supply:** Carson City Utilities

Subdivision Review No. 20643-T  
1/27/2009  
Page Two

**General:** The tentative map indicates that the source of water is to be from Carson City Utilities. To date, no letter has been received by this office indicating that there is sufficient water for the subject subdivision.

**Action:** Recommend tentative disapproval to water quantity as required by statutes for **City View Greenhomes** based on water service from Carson City Utilities, until such time that written notification addressed to this office is received listing the water right permit(s) from the water purveyor with an indication that it has both sufficient uncommitted water rights and developed water source capacity to serve the proposed subdivision.

Best regards,



Thomas K. Gallagher, P.E.  
Manager II, Water Rights Section Chief

TKG/sem

cc: Division of Real Estate  
Public Utilities Commission of Nevada  
Voltaire Green Homes, LLC  
Benjamin C. and Maureen Seljestad.  
BSA Consulting, LLC

CARSON CITY SCHOOL DISTRICT

PROPOSED SUBDIVISION PLAN  
IMPACT STATEMENT

SUBDIVISION Voltaire Green Homes UNITS 8

NRS 278.349 - Availability of School Services:

This property consists of 8 detached executive family homes on 15153-17220 square foot lots. Our impact statement indicates the total number of children that this project generates and which schools are affected.

Transportation: Transportation will be provided to the applicable, zoned schools in accordance with Carson City School District policies and regulations.

- A. Transportation would be provided to Bordewich Elementary, Carson Middle School and Carson High School from this area, these bus stop are located on the corner of Clearview Dr. and Cochise St.

Staffing/Supplies/Other: As enrollment increases, funds for staffing, materials and other costs are made available through the State of Nevada per pupil funding allocations, 2008-09 allotment is approximately \$4,800 per pupil.

Elementary School (s): Bordewich Elementary # Students 2

Middle School: Carson Middle School # Students 2

High School: Carson High School # Students 1

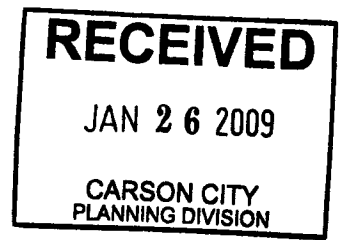
Discussion: Bordewich Elementary School will be able to accommodate these students. Carson Middle School and Carson High School will be able to accommodate these students.

NRS 278.346 - Site Acquisition: Being reviewed by Master Plan Committee.

  
Signature

Director of Operations  
Title

September 8, 2008  
Date



## MEMORANDUM

**TO:** Community Development

**FROM:** Duane Lemons, Fire Inspector

**DATE:** January 26, 2009

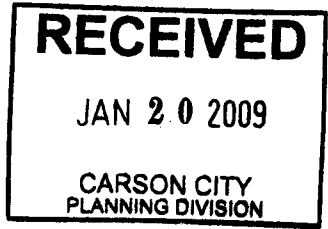
**SUBJECT:** AGENDA ITEMS FOR FEBRUARY 2009 PLANNING COMMISSION MEETING

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We reviewed the agenda items for the February 25, 2009 Planning Commission Meeting and have the following comments:

- SUP-08-076 Golden Gaming, Inc. We have no comments or concerns with this request.
- SUP-05-265(a) State of NV Dept. of Transportation We have no concerns with this request.
- AB-09-002 Benjamin & Maureen Saljestad. We have no concerns with this request.
- TSM-09-0003 Benjamin & Maureen Saljestad A fire hydrant will be required at corner of West Appion Way and two driveways. All other concerns were addressed during application review.

DL/llb



Presentations - No Comment

SUP 08-076  
SUP 05-265(a)  
AB 09-002  
TSM 09-003

Carson City Health and Human Services has no comments regarding the project as described in the packet received. The applicant must meet all applicable codes and ordinances as they apply to this request.

Teresa Hayes  
Environmental Health Specialist II  
Carson City Health and Human Services  
900 E. Long St  
Carson City, NV 89706  
Phone: (775) 887-2190 ext 1024  
Fax: (775) 887-2248

<b>File # (Ex: MPR #07-111)</b>	TSM 09-003
<b>Brief Description</b>	Voltaire Green Homes, LLC
<b>Project Address or APN</b>	009-253-10 & 009-255-10 (4500 & 4600 Voltaire)
<b>Bldg Div Plans Examiner</b>	Don Wilkins, Plans Examiner III
<b>Review Date</b>	Feb. 25, 2009 Planning Commission Meeting
<b>Total Spent on Review</b>	

**BUILDING DIVISION COMMENTS:**

***These comments do not constitute a complete plan review, but are merely observations based on the information provided. The comments do not reflect all submittal requirements necessary for this project, but are those requirements that have generated concerns with similar projects in the past.***

**General**

1. Project requires application for a Building Permit, issued through the Carson City Building Division. This will necessitate a complete review of the project to verify compliance with all adopted construction codes and municipal ordinances applicable to the scope of the project.

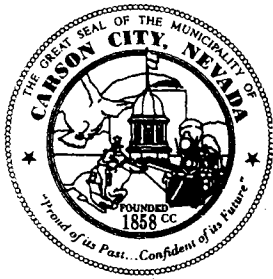
**Site Development Plan Submittal**

2. The plans submitted for creation of the subdivision shall comply with the prescriptive requirements found in the Carson City Building Division handout titled: *Commercial Submittal Requirements*. This handout may also be found online at: [www.carson-city.nv.us/Index.aspx?page=181](http://www.carson-city.nv.us/Index.aspx?page=181)
3. The Geotechnical Report, submitted as a part of the creation of the subdivision, shall comply with the following:
  - A. Shall show compliance with the currently adopted version of the International Building Code (IBC)
  - B. The Geotechnical Report for the proposed location shall include a complete assessment of the potential consequences of any liquefaction and soil strength loss, including estimation of differential settlement, lateral movement or reduction in foundation soil-bearing capacity, and shall address mitigation measures. ('06 IBC 1802.2 & 1802.2.7 #2)
4. As a part of the site development plan submittal, include a minimum of two (02) completed *Carson City Special Inspection & Testing Agreements* for the placement of fill to create the building pads.
5. Rockery retaining walls or rockery soil stabilization walls shall not be subject to surcharges, such as building foundations, adjacent retaining structures, slopes or vehicle surcharge (except parking lots and private driveways). Rockery walls over four (4) feet in (exposed) height shall be engineered and shall have structural observation. ('06 IBC 1806.1, as amended)
6. The submittal shall include two (02) copies of the Carson City Building Division *Special Inspection & Testing Agreement*, with original signatures. This is required for the material review and inspection of the structural fill placement by an approved third party Special Inspection Agency.

### **Comments Applicable To Building Plan Submittal**

7. The plans submitted for review shall comply with the prescriptive requirements found in the Carson City Building Division handout titled: *RESIDENTIAL PLAN SUBMITTAL REQUIREMENTS: One & Two Family Dwellings and Accessory Structures*. This handout may also be found online at: [www.carson-city.nv.us/Index.aspx?page=181](http://www.carson-city.nv.us/Index.aspx?page=181)
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9. The Foundation Plans, prepared as a part of the future building plans, shall indicate the requirements for concrete exposure to sulfates in the soil. ('06 IBC 1904.3)
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12. Provide a minimum of two (02) copies of the International Code Council Evaluation Services Report (*ICC ESR*) for the exterior plastering ("stucco") system. In addition, on the building elevation plan sheet, indicate the exterior plastering ("stucco") system manufacturer and product name/number, along with the ICC ESR number.
13. As a part of the building design, include a dimensioned detail for the separation between the weep screed and earth, and between the weep screed and hard surfaces. ('06 IBC 2512.1.2)





# CARSON CITY, NEVADA

CONSOLIDATED MUNICIPALITY AND STATE CAPITAL



## MEMORANDUM

TO: Lee Plemel, Planning Director  
Heidi Eskew-Herrmann, Assistant Planner  
Jennifer Pruitt, Senior Planner (Hardcopy and Email)

FROM: Roger Moellendorf, Parks & Recreation Director *[Signature]*

DATE: February 11, 2009

SUBJECT: Parks & Recreation Department's Comments Regarding  
TSM-09-003 - February 25, 2009, Planning Commission Meeting

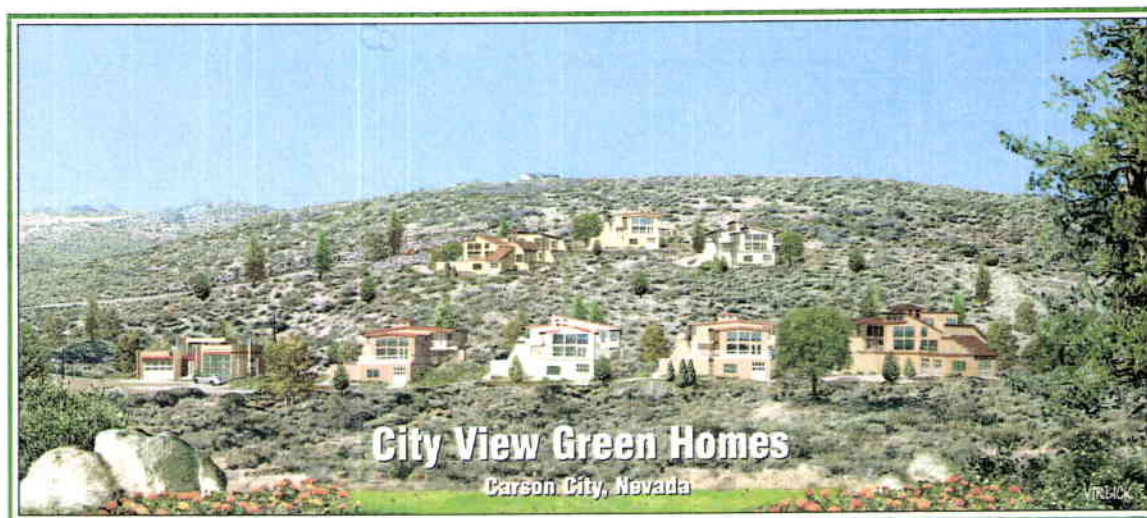
TSM-09-003	<p>1) This project will be subject to the Residential Construction Tax.</p> <p>2) The site is adjacent to the wilderness interface area; however, it has not been sought for acquisition by the Open Space Advisory Committee. Approximately 5 years ago, the Open Space Advisory Committee considered privately held lands immediately to the west where a single-family home is located on top of a hill. The Open Space Committee voted not to enter into negotiations towards the purchase of these lands further to the west and; therefore, it would not make sense to pursue the acquisition of these lands.</p> <p>3) The Unified Pathways Master Plan calls for the dedication and development of off-street unpaved double-track trail. The applicant has shown in the map a proposed 4-foot wide gravel pathway within a 50-foot access pathway easement. Staff would recommend that the 4-foot wide gravel pathway not be constructed since it does not connect to any other existing facility and just serves one edge of the north property line to the edge of the south property line. Staff welcomes the 50-foot access pathway easement proposed with this map that will be used in the future for the development of a trail.</p> <p>4) The site is located in the vicinity of Voltaire Canyon Road which is located to the north and has been designated by the U.S. Forest Service and Carson City as an authorized motorized route to various locations behind C-Hill and connecting to the Borda Meadows and Kings Canyon Road.</p> <p>5) For the applicant's information, the closest parks for the subdivision are Ross Gold Park located to the east across U.S. Highway 395 and the Fairgrounds and Fuji Park complex located to the south.</p> <p>Thank you for the opportunity and comment on this tentative map.</p>
------------	--

# City View Greenhomes

Tentative Map Application

Prepared for:

Voltaire Green Homes LLC  
PO Box 291  
Dayton, NV. 89403



Prepared by:

BSA Consulting LLC  
123 W. Nye Lane, Suite 709  
Carson City, NV. 89706

January 14, 2009

**RECEIVED**

FEB 17 2009

CARSON CITY  
PLANNING DIVISION

TSM - 09 - 003

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## **City View Greenhomes Executive Summary**

The City View Greenhomes project consists of an 8-unit conceptually mapped subdivision on just over 8 acres located at 4500/4600 Voltaire Street in Carson City, Nevada.

This is an in-fill development in an area that is currently and will stay zoned single family one acre. This project is fully committed to sustainable and green building practices, and will lead the way for many green projects to come in Northern Nevada. This project confirms its dedication to green building through the incorporation of a certified green builder (BSA Construction), and commitment to certifying the homes to Energy Star and Sierra Green (an NAHB national green building program) building guidelines for certification. Every aspect of this project considers green practices from the minimal impact development of the site, to the highly energy efficient home construction, to the landscape design.

The project will take many strides toward a sustainable and green development, and will verify these efforts through acquiring the green certifications listed above on every home built. Mitigation of developments effects on this hillside property will be accomplished through the common open spaced development that affords us the opportunity to cluster the home development into areas that are not as steep on the site, and preserve areas above 33% slope for open space, minimal grading by the use of stepped foundations that contour the home to the existing topography, rockery walls to blend the areas of earth retaining into the existing landscape, as well as native specie and drought resistant landscaping to reduce water consumption. The development of this site will also mitigate and repair an existing and highly visible scar that was created many years ago by mass excavation on the hillside for the use of material on a western movie set in downtown Carson City. The high end contemporary green homes will have many desirable amenities including a stylish contemporary architectural style, well designed native species and drought resistant landscapes, and many efficient designs from a high r-value shell built with structural integrated panels or insulated concrete forms, to high efficiency heating and cooling systems, to recycled and healthy interior finishes that create good air quality in the homes.

The overall goal is to provide a visually pleasing development that the will enhance the neighborhood, provide quality, healthy, energy efficient homes and be the standard for future green development in Carson City and Northern Nevada.

Carson City Planning Division  
2621 Northgate Lane, Suite 62 • Carson City NV 89706  
Phone: (775) 887-2180 • E-mail: plandept@ci.carson-city.nv.us

FOR OFFICE USE ONLY:

TSM - 09 -

TENTATIVE MAP FOR A  
SUBDIVISION

APPLICANT PHONE #  
VOLTAIRE GREEN HOMES LLC 815-1691

STATE FEES: See checklist. Submit the two state checks at the time of initial application submittal.

MAILING ADDRESS, CITY, STATE, ZIP  
P.O. Box 291 DAYTON NV 89403

FEE: \$3,500.00+ noticing fee + CD containing all application data (to be submitted when application is deemed complete by staff)

ENGINEER PHONE #  
BSA CONSULTING L.L.C. 815-1691

SUBMITTAL PACKET  
See checklist (fill out checklist and return to staff with the application packet)

MAILING ADDRESS, CITY, STATE, ZIP  
123 W. Nye Ln. SUITE 709 Carson City NV.

Application Reviewed and Received By:

E-MAIL ADDRESS  
BSMITH@BSA DEVELOPMENT.COM

PROPERTY ADDRESS, CITY, STATE, ZIP  
4500-4600 VOLTAIRE ST. Carson City NV.

PRESENT ZONING APN(S)  
SFIA 009-255-01 009-253-10

REQUEST: In accordance with the provisions of Title 17 of the Carson City Municipal Code, application is hereby made for a Planned Unit Development on property situated at:

4500 & 4600 VOLTAIRE ST. CARSON CITY, NV.

The required modifications to Carson City's Land Use Regulations are as follows:

NO MODIFICATIONS REQUIRED

ACKNOWLEDGMENT OF APPLICANT: (a) I certify that the foregoing statement are true and correct to the best of my knowledge and belief; (b) I agree to fulfill all conditions established by the Board of Supervisors.

Applicant's Signature \_\_\_\_\_ Date \_\_\_\_\_

PROPERTY OWNER'S AFFIDAVIT

I, \_\_\_\_\_, being duly deposed, do hereby affirm that I am the record owner of the subject property, and that I have knowledge of, and I agree to, the filing of this application.

Signature \_\_\_\_\_ Address \_\_\_\_\_ Date \_\_\_\_\_

Use additional page(s) if necessary for other names.

STATE OF NEVADA )  
COUNTY )

On \_\_\_\_\_, 200\_\_\_\_, personally appeared before me, a notary public, \_\_\_\_\_, personally known (or proved) to me to be the person whose name is subscribed to the foregoing document and who acknowledged to me that he/she executed the foregoing document.

Notary Public \_\_\_\_\_

NOTE: In order to avoid unnecessary time delays in processing your develop project, it is important that it be as complete as possible when submitted. A checklist is available to assist you and your engineer. If you have further questions regarding your application, please call the Planning Division at 775-887-2180.

## Tentative Subdivision Submittal Checklist

Yes    No

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Conceptual Map conference held previous to submittal of subdivision application. |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. 21 copies of Tentative Map (1Original + 20 Copies)<br>(folded 8-1/2 X 11).       |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. 10 copies of Informational Booklet.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. State fee payment (2 checks).  |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Application form completed.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. <u>    </u> 3 wet stamped maps for State offices and Engineering Division.       |

Note: Digital data is required on a CD after the application is deemed complete by staff.

-----  
 The tentative submittal packet must include all of the following information. Packets which do not contain this information or information requested at the conceptual may not be scheduled on the next available Planning Commission agenda. It is up to the applicant to ensure that all required information is submitted in order for staff and the Planning Commission to make a proper recommendation. In addition to the brief description of your project and proposed use, provide additional page(s) to show a more detailed summary of your project and proposal.

Yes    No

- |                                     |                          |   |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. The location and size of the site, the lot layout and the lot lines of the proposed development, including a legal description of the land and the owners interest in the land proposed to be developed, by an affidavit of ownership. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2. The density of land use to be allocated to parts of the site to be developed; a tabulation of the total land area and the percentage designed for the various uses.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. The location, size of any park land or open space, and the form of organization proposed to own and maintain any common open space, and amount of recreational improvements. <u>Provide two copies of proposed C.C.&amp;R.'s.</u>      |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. The subdivision name, and name and address of the developer and engineer and date of map.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 5. The proposed circulation pattern including the design of all public and private streets, name and width of streets and the location of adjoining streets, sidewalks and bikeways.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. Provide a street grading plan.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Adjacent subdivision, land uses, zoning, and ownership abutting the project.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8. Number, size, square footage and use of proposed parcels. Blocks and parcels are to be numbered consecutively and the dimension of all parcels are to be shown.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9. A proposed grading plan meeting department of public works standards and requirements showing all cuts and retaining walls to be designated.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10. Provide a landscape plan for the development.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 11. Topographic map with contour intervals of two and one-half feet for slopes of less than 10% and five feet for slopes of greater than 10%.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 12. A note indicating location of all utility easements proposed and existing.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 13. The layout of water, sewer, and storm drainage systems.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 14. A soils report including soil types, seasonal high water table, and percolation rates (if on septic).   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 15. North arrow and scale, all sheets to be numbered.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 16. Location of existing buildings.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 17. Building setbacks to be noted on plat. If applying to Planning Commission for staggered setback approvals, separate set of 12 plans to be submitted.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 18. Areas not a part of the subdivision to be designated as "not a part".   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 19. Provide a conceptual drainage study meeting the standards and requirements of the Carson City Development Standards Division 14.8.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 20. An indication of the type of water system to be used, its water sources and engineering data on fire flows.   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 21. Location of all natural drainage features shown.      Yes    No   |

- \_\_\_ 22. An erosion control plan including stream protection, road drainage, erosion prevention, prevention of untreated discharge to streams, if applicable.
- \_\_\_ 23. Solid waste provision.
- \_\_\_ 24. Height, size, location and use of all structures, fences and walls are to be shown.
- \_\_\_ 25. An indication of method of sewage disposal to be used and area of disposal.
- \_\_\_ 26. A map showing a 100 year flood plan, as determined by recognized methods, for those areas subject to flooding; show earthquake fault lines through the proposed development with building setbacks from fault line as recommended by a geotechnical study.
- \_\_\_ 27. The development shall be described by 40 acre subdivision, section, township and range.
- \_\_\_ 28. Indicate master plan designation for the project.
- \_\_\_ 29. A master plan for potential development of the property under the ownership or control of the developer in the area of the proposed development.
- \_\_\_ 30. Location, dimensions of all vehicle parking and/or boat/RV storage areas, if applicable.
- \_\_\_ 31. In the case of plans which call for development over a period of years, a schedule showing proposed time within which applications for final approval of all sections of the development are intended to be filed.
- \_\_\_  32. Shall prove that no tax is delinquent by placing a certificate signed by the city treasurer to this effect (NRS.278.349(5)) on the plat.
- \_\_\_ 33. Traffic study stating average daily trips generated from the project.
- \_\_\_ 34. A written document indicating the benefits of the development to Carson City, any adverse impacts which may arise from the development and the mitigation programs, and how the proposed development will enhance or benefit the surrounding areas and stating how dust will be controlled. Address how your project complies with the attached NRS278.349(3); addressing each section item by item.
- \_\_\_ 35. A written document addressing the Master Plan Policy Checklist for a Conceptual Map for a Planned Unit Development of the five items that appear in the Carson City Master Plan. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. Address each theme; a check indicates that the proposed development meets the applicable Master Plan Policy. In your own words provide written support of the policy statement. You may want to acquire a free CD or purchase a paper copy of the Master Plan from the Planning Division, or review the copy in the Planning Office or in the reference section of the Ormsby Public Library on Roop Street, or use our website at [www.carson-city.nv.us](http://www.carson-city.nv.us).
- \_\_\_ \_\_\_ 36. Application complete \_\_\_\_\_ Date \_\_\_\_\_

The State Division of Environmental Protection will now require fees for the review of subdivision and planned unit development applications. This fee is in addition to the fees required by State Water Resources. They also require wet stamped original maps.

To assure the necessary reviews are completed, the Planning Division will require payment of the State fees at the time of the City application submittal. This can be handled by submitting two checks to this office: one payable to NDEP for \$400 per map plus \$3.00 per lot AND \$100 per map plus \$1.00 per lot; the second check payable to STATE WATER RESOURCES in the amount of \$150 per map plus \$1.00 per lot. The checks will be routed to the State offices with their copy of the application packet. The alternative method is to pay the State offices directly and submit the receipts with your City application.

The State Division of Environmental Protection will also require a non-refundable fee of \$50 for each review of final subdivision and planned unit development maps.

**NOTE:** Fees are subject to change. It is applicant's responsibility to ensure their checks are submitted for current required fees.



# Master Plan Policy Checklist

## Conceptual & Tentative Subdivisions, PUD's & Parcel Maps

### PURPOSE

The purpose of a development checklist is to provide a list of questions that address whether a development proposal is in conformance with the goals and objectives of the 2006 Carson City Master Plan that are related to subdivisions of property. This checklist is designed for developers, staff, and decision-makers and is intended to be used as a guide only.

Development Name: CITY VIEW GREEN HOMES

Reviewed By: \_\_\_\_\_

Date of Review: \_\_\_\_\_

### DEVELOPMENT CHECKLIST

The following five themes are those themes that appear in the Carson City Master Plan and which reflect the community's vision at a broad policy level. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. A check mark indicates that the proposed development meets the applicable Master Plan policy. The Policy Number is indicated at the end of each policy statement summary. Refer to the Comprehensive Master Plan for complete policy language.

#### CHAPTER 3: A BALANCED LAND USE PATTERN

The Carson City Master Plan seeks to establish a balance of land uses within the community by providing employment opportunities, a diverse choice of housing, recreational opportunities, and retail services.

##### Is or does the proposed development:

- Consistent with the Master Plan Land Use Map in location and density?
- Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)?
- Encourage the use of sustainable building materials and construction techniques to promote water and energy conservation (1.1e, f)?
- Located in a priority infill development area (1.2a)?



- Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?
- Encourage cluster development techniques, particularly at the urban interface with surrounding public lands, as appropriate, and protect distinctive site features (1.4b, c, 3.2a)?
- At adjacent county boundaries, coordinated with adjacent existing or planned development with regards to compatibility, access and amenities (1.5a)?
- Located to be adequately served by city services including fire and sheriff services, and coordinated with the School District to ensure the adequate provision of schools (1.5d)?
- In identified Mixed-Use areas, promote mixed-use development patterns as appropriate for the surrounding context consistent with the land use descriptions of the applicable Mixed-Use designation, and meet the intent of the Mixed-Use Evaluation Criteria (2.1b, 2.2b, 2.3b, Land Use Districts, Appendix C)?
- Provide a variety of housing models and densities within the urbanized area appropriate to the development size, location and surrounding neighborhood context (2.2a, 9.1a)?
- Protect environmentally sensitive areas through proper setbacks, dedication, or other mechanisms (3.1b)?
- If at the urban interface, provide multiple access points, maintain defensible space (for fires) and are constructed of fire resistant materials (3.3b)?
- Sited outside the primary floodplain and away from geologic hazard areas or follow the required setbacks or other mitigation measures (3.3d, e)?
- Provide for levels of services (i.e. water, sewer, road improvements, sidewalks, etc.) consistent with the Land Use designation and adequate for the proposed development (Land Use table descriptions)?
- If located within an identified Specific Plan Area (SPA), meet the applicable policies of that SPA (Land Use Map, Chapter 8)?

## **CHAPTER 4: EQUITABLE DISTRIBUTION OF RECREATIONAL OPPORTUNITIES**

The Carson City Master Plan seeks to continue providing a diverse range of park and recreational opportunities to include facilities and programming for all ages and varying interests to serve both existing and future neighborhoods.

### **Is or does the proposed development:**

- Provide park facilities commensurate with the demand created and consistent with the City's adopted standards (4.1b, c)?
- Consistent with the Open Space Master Plan and Carson River Master Plan (4.3a)?



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## CHAPTER 5: ECONOMIC VITALITY

The Carson City Master Plan seeks to maintain its strong diversified economic base by promoting principles which focus on retaining and enhancing the strong employment base, include a broader range of retail services in targeted areas, and include the roles of technology, tourism, recreational amenities, and other economic strengths vital to a successful community.

### Is or does the proposed development:

- Incorporating public facilities and amenities that will improve residents' quality of life (5.5e)?
- Promote revitalization of the Downtown core (5.6a)?
- Incorporate additional housing in and around Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

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## CHAPTER 6: LIVABLE NEIGHBORHOODS AND ACTIVITY CENTERS

The Carson City Master Plan seeks to promote safe, attractive and diverse neighborhoods, compact mixed-use activity centers, and a vibrant, pedestrian-friendly Downtown.

### Is or does the proposed development:

- Promote variety and visual interest through the incorporation of varied lot sizes, building styles and colors, garage orientation and other features (6.1b)?
- Provide variety and visual interest through the incorporation of well-articulated building facades, clearly identified entrances and pedestrian connections, landscaping and other features consistent with the Development Standards (6.1c)?
- Provide appropriate height, density and setback transitions and connectivity to surrounding development to ensure compatibility with surrounding development for infill projects or adjacent to existing rural neighborhoods (6.2a, 9.3b 9.4a)?
- If located in an identified Mixed-Use Activity Center area, contain the appropriate mix, size and density of land uses consistent with the Mixed-Use district policies (7.1a, b)?
- If located Downtown:
  - Integrate an appropriate mix and density of uses (8.1a, e)?
  - Include buildings at the appropriate scale for the applicable Downtown Character Area (8.1b)?
  - Incorporate appropriate public spaces, plazas and other amenities (8.1d)?



## **CHAPTER 7: A CONNECTED CITY**

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The Carson City Master Plan seeks promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational amenities and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks.

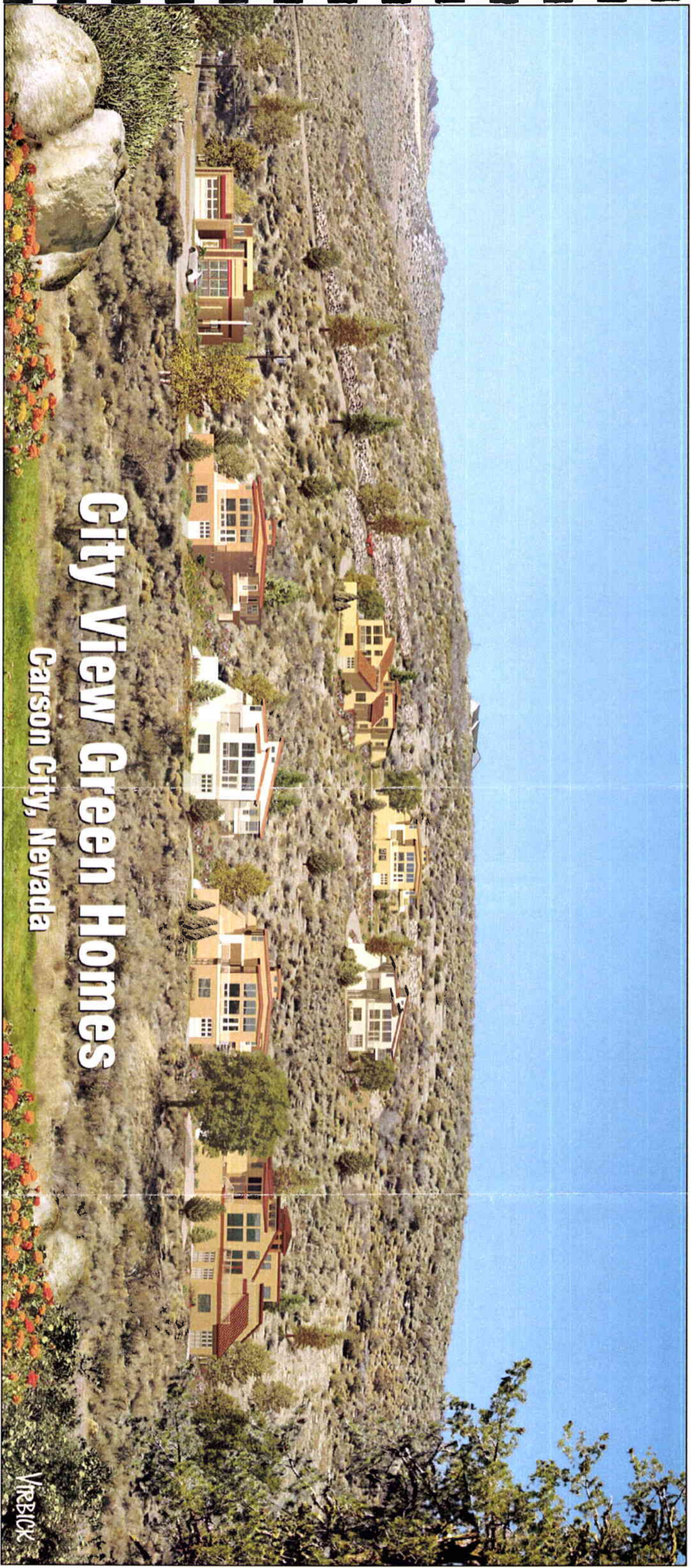
**Is or does the proposed development:**

- Promote transit-supportive development patterns (e.g. mixed-use, pedestrian-oriented, higher density) along major travel corridors to facilitate future transit (11.2b)?
- Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?
- Provide appropriate pathways through the development and to surrounding lands, including parks and public lands, consistent with the Unified Pathways Master Plan (12.1a, c)?



**EXISTING SITE**

**Carson City, Nevada**



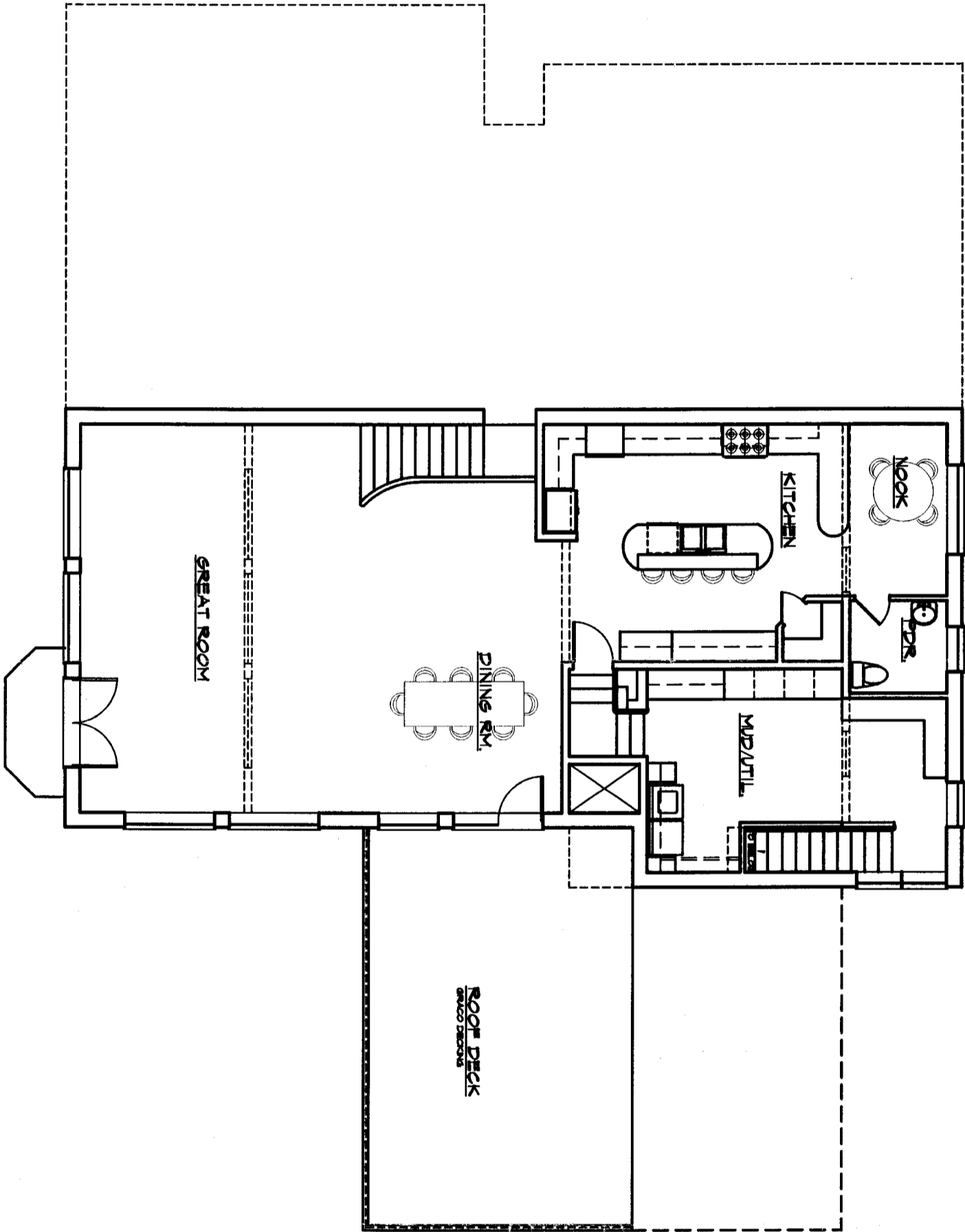
# City View Green Homes

Carson City, Nevada

MRBICK




MERRICK

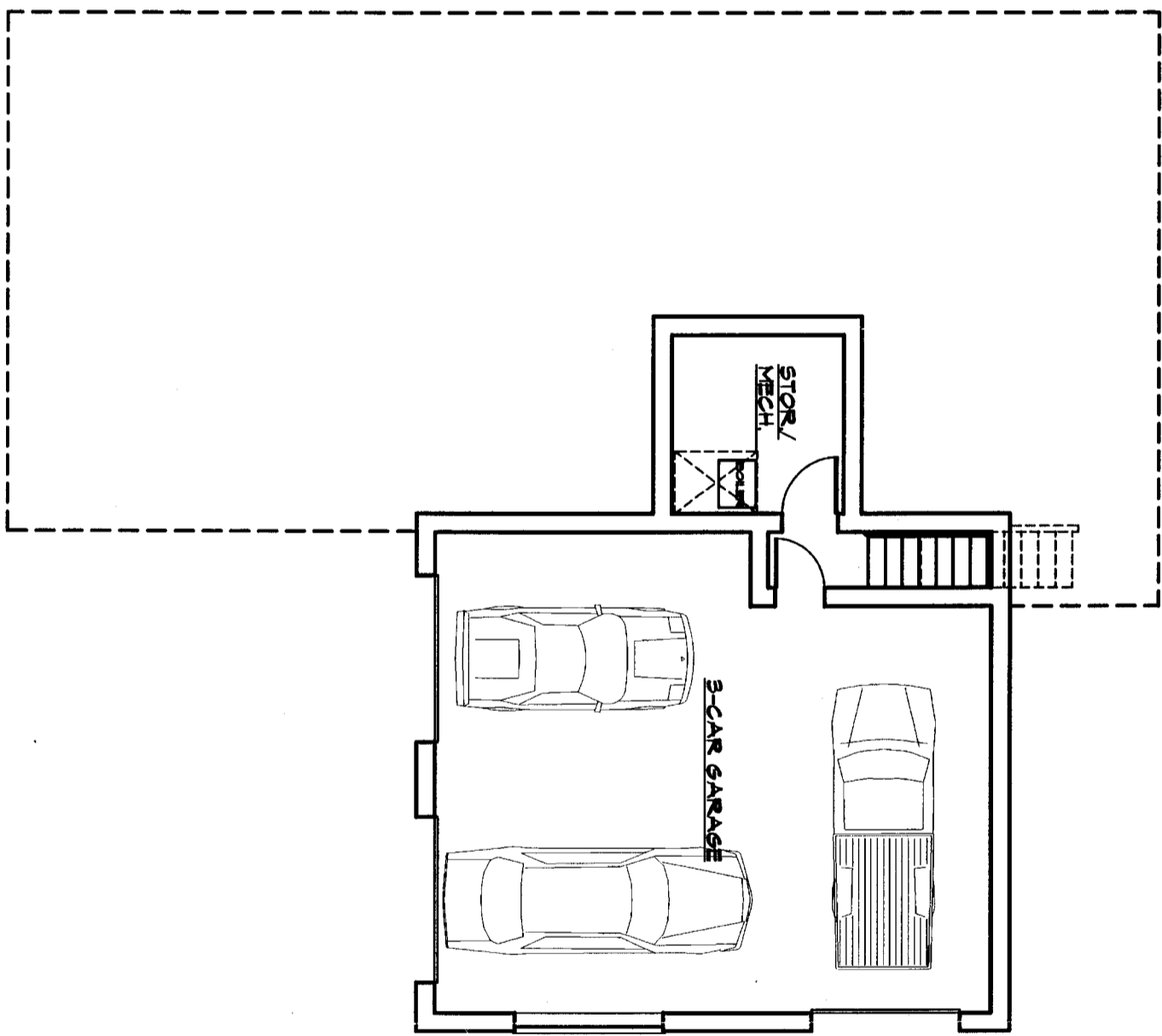


MAIN FLOOR PLAN  
SCALE 1/4" = 1'-0"



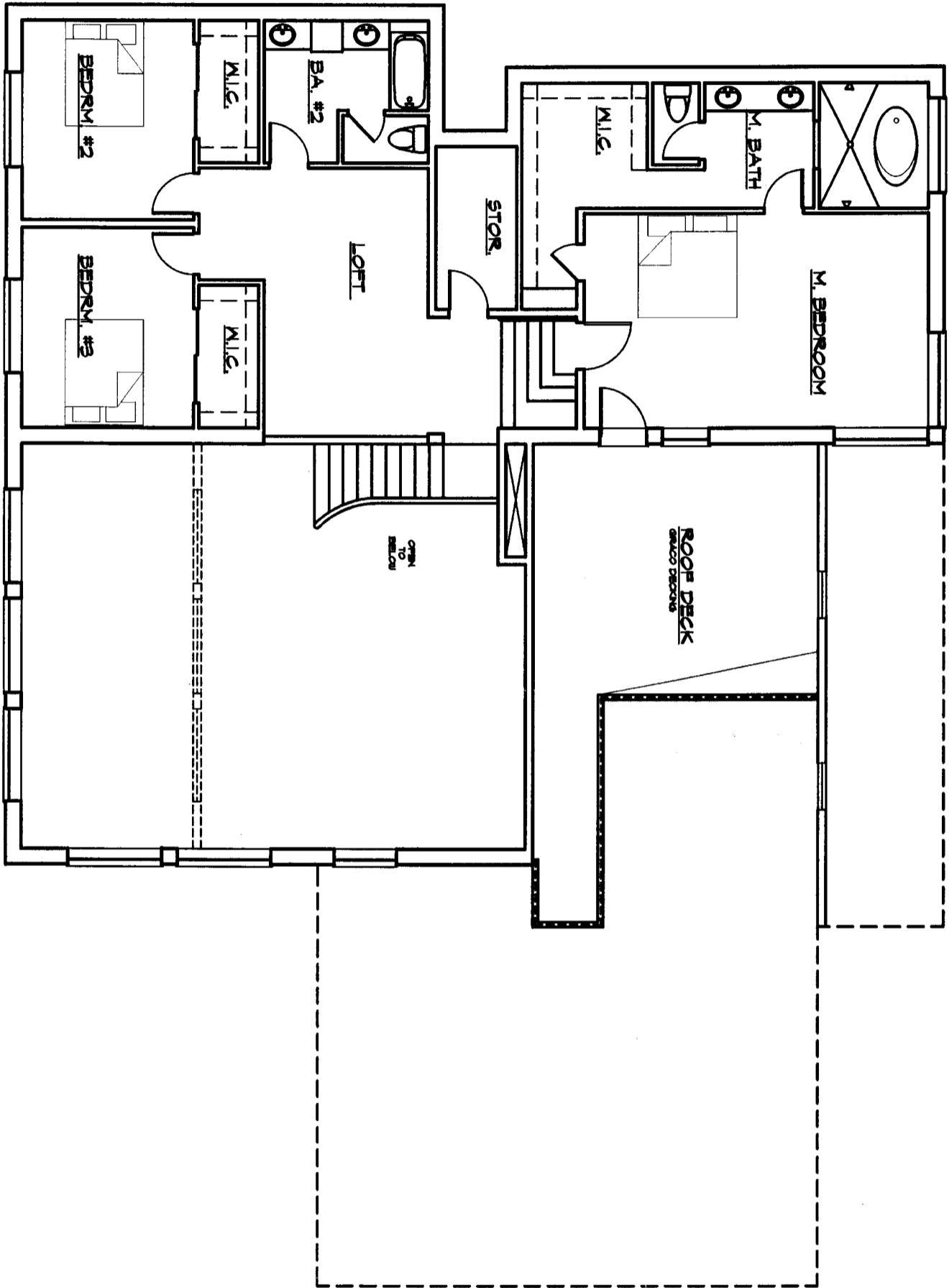
<b>8-A</b>	DATE: 1-14-09	<b>MAIN FLOOR PLAN</b> A NEW HOME FOR <b>VOLTAIRE GREEN HOMES LLC</b>	 <b>M. Steven Hendricks L.L.C.</b> Residential Designs	(775) 219-6393 (775) 846-2735 fax mhendricks@aol.com P.O. Box 19108 Reno, NV. 89511	ALL DIMENSIONS & CONSTRUCTION REQUIREMENTS OF SPACE ARE COPYRIGHT BY THE DESIGNER. UNDER THE PROVISIONS OF THIS SET, NO PARTS EXCEPT BY PERMISSION OF DESIGNER OR DISTRIBUTION OF DIMENSIONS IS PROHIBITED.
	PROJECT LOCATION: VOLTAIRE GREEN GARSON CITY, NV				

LOWER FLOOR PLAN NORTH  
 SCALE: 1/4" = 1'-0"




<b>A-3</b>	DATE: 1-11-09	<b>LOWER FLOOR PLAN</b> A NEW HOME FOR <b>VOLTAIRE GREEN HOMES LLC</b>	<b>M. Steven Hendricks L.L.C.</b> Residential Designs	(775) 219-8393 (775) 846-2735 fax shendrickard@aol.com P.O. Box 19108 Reno, NV. 89511	ALL SUPPLIERS & CONTRACTORS INSTALLMENTS OF SERVICE ARE OBTAINED BY THE DESIGNER UNDER THE PROVISIONS OF MSR 60A. LAURENCE KENNEDY OBLIGATION OF INSURANCE OR DISTRIBUTION OF DRAWINGS IS PROHIBITED.				
	JOB NO.: 09-08					PROJECT LOCATION: VOLTAIRE DR GARSON CITY, NV			

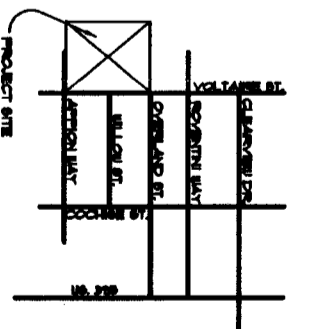




UPPER FLOOR PLAN  
SCALE: 1/4" = 1'-0"



<b>9-A</b> <small>REVISED</small>	DWG 1-14-08 JOB NO. 08-08 PROJECT LOCATION VOLTAIRE EYE GARDEN CITY, NY	<b>UPPER FLOOR PLAN</b> A NEW HOME FOR <b>VOLTAIRE GREEN HOMES LLC</b>	 <b>M. Steven Hendricks L.L.C.</b> Residential Designs	(775) 219-8393 (775) 849-2735 fax mhendrickard@aol.com P.O. Box 19108 Reno, NV. 89511	ALL DIMENSIONS AND CONSTRUCTION REQUIREMENTS OF FINISHES ARE GOVERNED BY THE CONTRACT UNLESS THE PROVISIONS OF THIS SET OF DRAWINGS SPECIFY OTHERWISE OR OTHERWISE NOTED. NO PROVISIONS.
	ALL DIMENSIONS AND CONSTRUCTION REQUIREMENTS OF FINISHES ARE GOVERNED BY THE CONTRACT UNLESS THE PROVISIONS OF THIS SET OF DRAWINGS SPECIFY OTHERWISE OR OTHERWISE NOTED. NO PROVISIONS.				



**VICINITY MAP NORTH**



SCALE: NOT TO SCALE

**SITE AREAS**  
 TOTAL SITE AREA 288,844 sq. ft. (6.6 ACRES)  
 TOTAL LOT AREA 288,844 sq. ft. (6.6 ACRES)  
 DRIVEWAY AREA 288,844 sq. ft. (6.6 ACRES)  
 OPEN SPACE AREA 288,844 sq. ft. (6.6 ACRES)

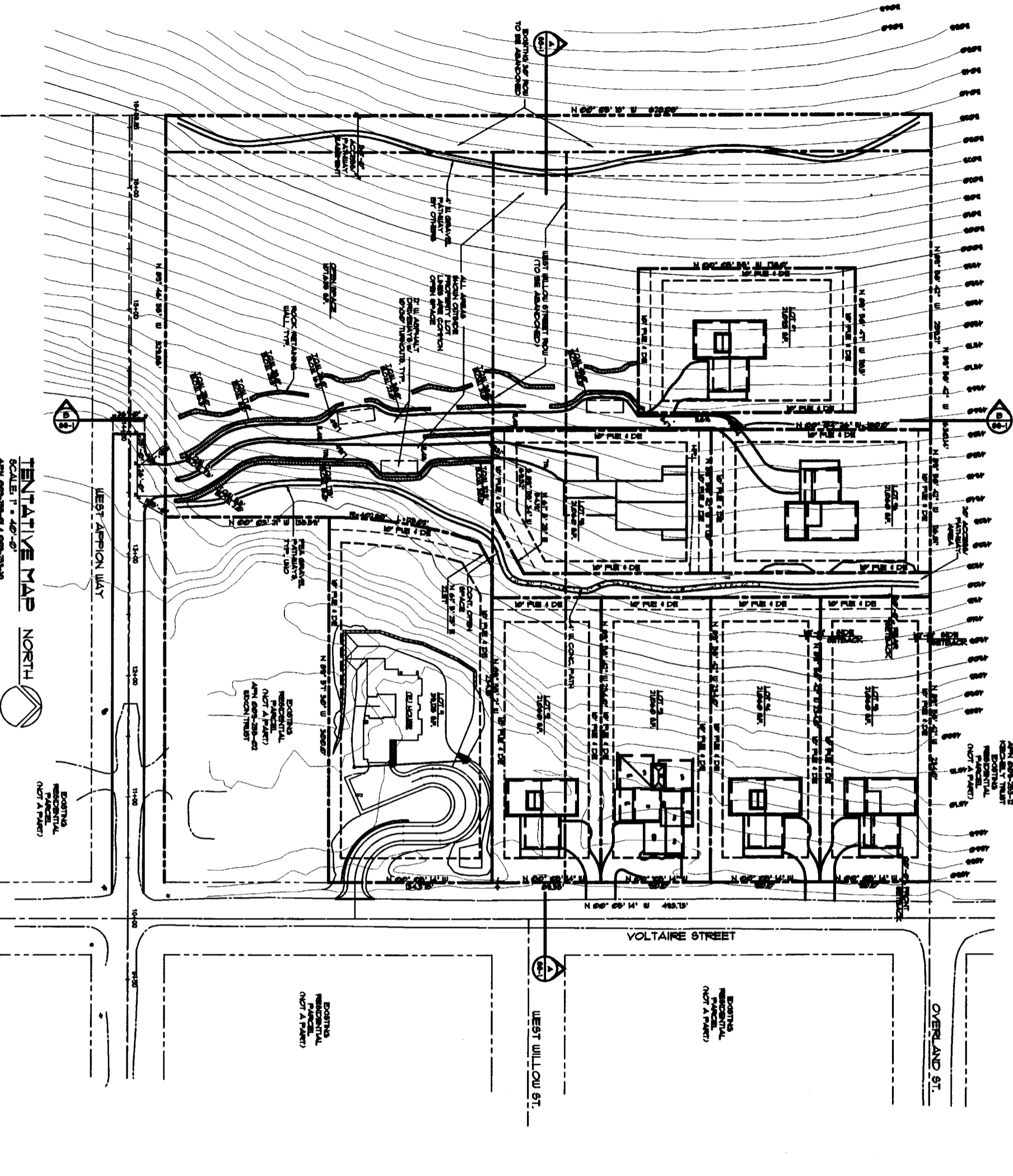
**GENERAL INFORMATION**  
 WATER SYSTEM TO BE USED SHALL BE CITY SERVICE FROM BODINGS OF WATER LINE IN VOLTAIRE ST.  
 ALL BODINGS ARE LOCATED IN THE PROJECT ON VOLTARE STREET WITH FLOOR FINISH INCLUDED IN THE INFORMATION BOOKLET.  
 THE AREA IS NOT LOCATED IN A FLOOD PLANE AND NO FLOODING SHALL OCCUR FROM THE PROJECT.  
 THE PLANNED BUILD OUT OF THE SUBDIVISION SHALL BE IN ACCORDANCE WITH THE CITY OF CARSON, CALIFORNIA, AND THE STATE OF CALIFORNIA.  
 THE CITY ENGINEER HAS REVIEWED THE PROJECT AND IS SATISFIED WITH THE INFORMATION PROVIDED. HOWEVER, MARKET CONDITIONS WILL HAVE AN EFFECT ON A CERTAIN DESIGN.

THE SUBDIVISION OF A TOTAL HORSE WILL NOT OCCUR THIS YEAR AND/OR SO FURTHER FOR A TRAFFIC STUDY.  
 THE NEW PARKWAY WILL BE 4 FT. W AND WILL BE DESIGNED TO FOLLOW THE NATURAL TOPOGRAPHY AS MUCH AS POSSIBLE. THE DRIVEWAY SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE AS NOTED ON THE PLAN OVER CONCRETE SOIL. SEE LOT 9 FOR TYP. LOT BACKLASH INFORMATION.  
 THERE WILL BE NO CLUSTER HOMES USED IN THIS SUBDIVISION.

**EROSION CONTROL PLAN**  
 EROSION CONTROL SHALL MEET THE REQUIREMENTS OF SECTION 151 OF THE C.C.D.C. AND SHALL INCLUDE THE FOLLOWING:  
 ALL TEMPORARY AND PERMANENT FACILITIES SHALL BE INSTALLED PRIOR TO THE START OF WORK.  
 ALL EARTH DISTURBANCES SHALL BE CONDUCTED IN A MANNER TO PREVENT OR MINIMIZE ACCUMULATED SOIL EROSION AND RESULTING SEDIMENTATION.  
 SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE DESIGNED AND IMPLEMENTED AND MAINTAINED BY PERSONS EMPLOYED IN EARTH DISTURBANCE.  
 ALL EXPOSED AREAS SHALL BE LIMITED TO THE SHORTEST POSSIBLE TIME.  
 SEDIMENT CAUSED BY ACCUMULATED SOIL EROSION SHALL BE REMOVED FROM RAINWATER TO THE NEAREST EXISTENT PRACTICABLE BEFORE IT LEAVES THE SITE OF THE DISTURBANCE.  
 ALL DISTURBED AREAS SHALL BE GRASSED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL FACILITIES AFTER REMOVAL OF TEMPORARY CONTROL FACILITIES.  
 ALL TEMPORARY CONTROL MEASURES SHALL BE CONSIDERED AS SOON AS POSSIBLE AFTER FULL GRASSING.  
 TEMPORARY SILT FENCING SHALL BE USED AS CONTROL FOR SOIL EROSION DURING CONSTRUCTION.  
 MATERIAL STORAGE SHALL BE LIMITED TO THE DRIVEWAY AREAS ON EACH LOT TO THE EXTENT POSSIBLE.  
 ALL CONCRETE WORK SHALL BE DONE IN AN AREA TO BE DETERMINED BY THE ENGINEER PRIOR TO FLOOD UNDERMINABLE LOCATION.

**DRAWING LIST**

TH-1	TENTATIVE MAP
DR-1	DRAINAGE / GRADING PLAN
SA-1	SITE ANALYSIS PLAN
UT-1	UTILITY PLAN
LD-1	LANDSCAPE PLAN
SS-1	SITE SECTIONS
PL-1	PROFIT PLANS
PL-2	FINAL PHASE PLAN



**TENTATIVE MAP NORTH**



SCALE: 1" = 40'-0"  
 APRIL 2008-20-01 + 008-23-10  
 BEING A PORTION ON  
 75 N. R. 20 E. T. 103 S. R. 1  
 PLASTER PLAN LAND USE IS LOW DENSITY RESIDENTIAL (LDR)

**TENTATIVE MAP  
 CITY VIEW GREEN HOMES**

BSA CONSULTING LLC  
 120 W. KYLE LIL BLVD 700  
 CARSON CITY, NEVADA 89706  
 (775) 892-2801  
 (775) 846-9476 FAX



NO.	DATE	DESCRIPTION

DATE PLOT	1-20-08
DWG. NO.	
DWG. NAME	
SCALE	1"=40'
SHEET NO.	TH-1

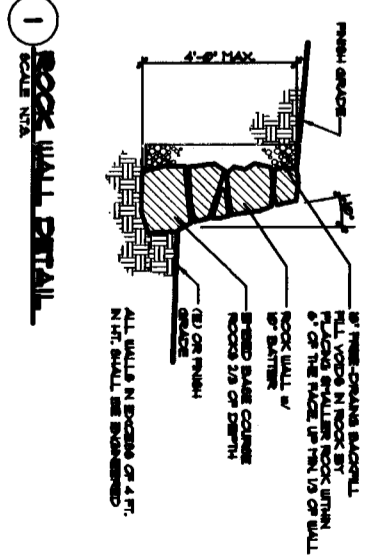
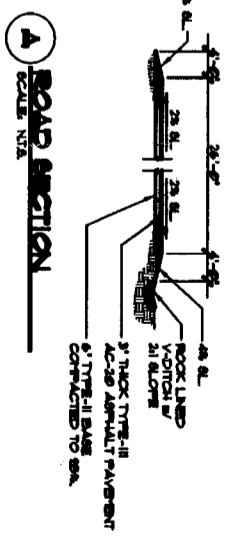
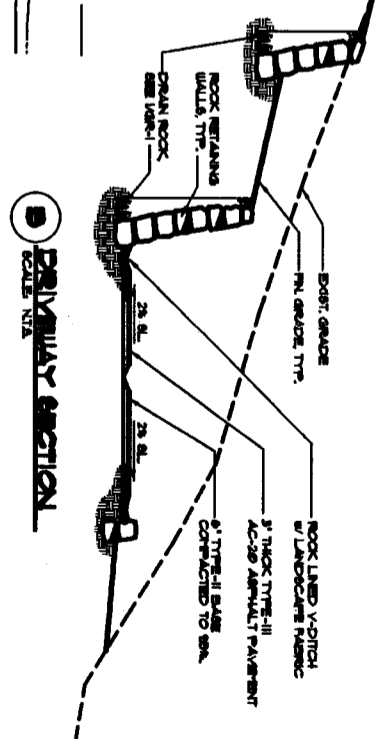
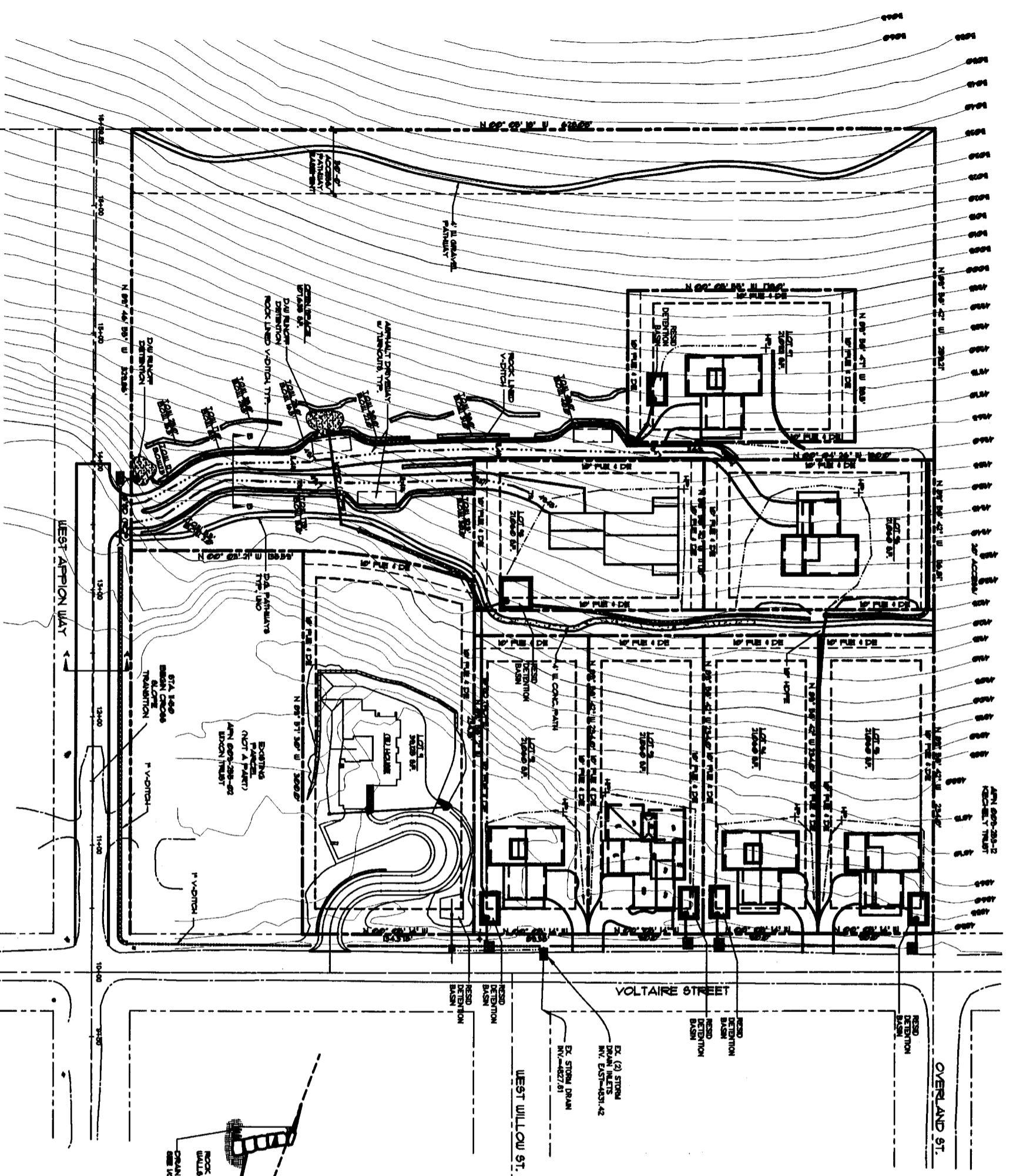
**DRAINAGE/GRADING PLAN NORTH**

SCALE: 1" = 40'-0"

APN: 009-28-01 + 009-28-10

SEEING A PORTION ON SHEET 14 IN SECTION II

T.B.N. R.28 E. HD.841



**DRAINAGE/GRADING PLAN  
CITY VIEW GREEN HOMES**

BSA CONSULTING LLC  
280 W. WY. LIL. SUITE 700  
CARSON CITY, NEVADA 89709  
775-882-1801  
775-882-1828 FAX



NO.	DATE	DESCRIPTION

DATE: 1/14/09	SCALE: 1"=40'
DATE: 1/14/09	SCALE: 1"=40'
DATE: 1/14/09	SCALE: 1"=40'
DATE: 1/14/09	SCALE: 1"=40'
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DATE: 1/14/09	SCALE: 1"=40'
DATE: 1/14/09	SCALE: 1"=40'
DATE: 1/14/09	SCALE: 1"=40'
DATE: 1/14/09	SCALE: 1"=40'
DATE: 1/14/09	SCALE: 1"=40'

DWG BY: BMS/MSH CHK BY: BMS/MSH

N 00° 00' 00" W 420.00'

N 89° 44' 59" W 323.00'

EXISTING  
OVERLAND ST

LOT 1  
10,000 SQ. FT.

LOT 2  
10,000 SQ. FT.

LOT 3  
10,000 SQ. FT.

LOT 4  
10,000 SQ. FT.

LOT 5  
10,000 SQ. FT.

LOT 6  
10,000 SQ. FT.

LOT 7  
10,000 SQ. FT.

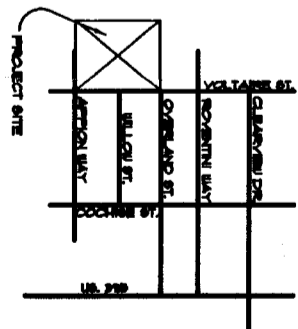
EXISTING  
PARCEL  
(NOT A PART)  
APN 009-285-02  
UPON TRIBUT

WEST AFRICAN WAY

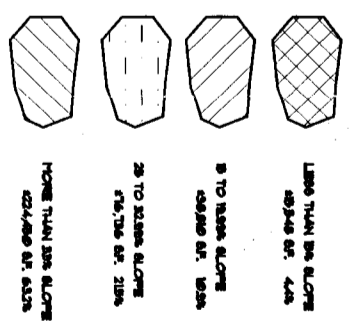
VOLTAIRE STREET

OVERLAND ST.

WEST WILLOW ST.



SITE AREA:  
TOTAL SITE AREA 88,800 SQ. FT. (2.0 ACRES)  
TOTAL LOT AREA 70,000 SQ. FT. (1.6 ACRES)  
TOTAL LOT AREA 18,800 SQ. FT. (0.43 ACRES)  
TOTAL LOT AREA 18,800 SQ. FT. (0.43 ACRES)  
TOTAL LOT AREA 18,800 SQ. FT. (0.43 ACRES)



**SITE ANALYSIS**

NORTH



SCALE: 1" = 40'-0"  
APN 009-285-01 + 009-285-10  
WEST AFRICAN WAY  
WEST WILLOW ST  
T B N R 30 E 1100 241

**SITE ANALYSIS  
CITY VIEW GREEN HOMES**

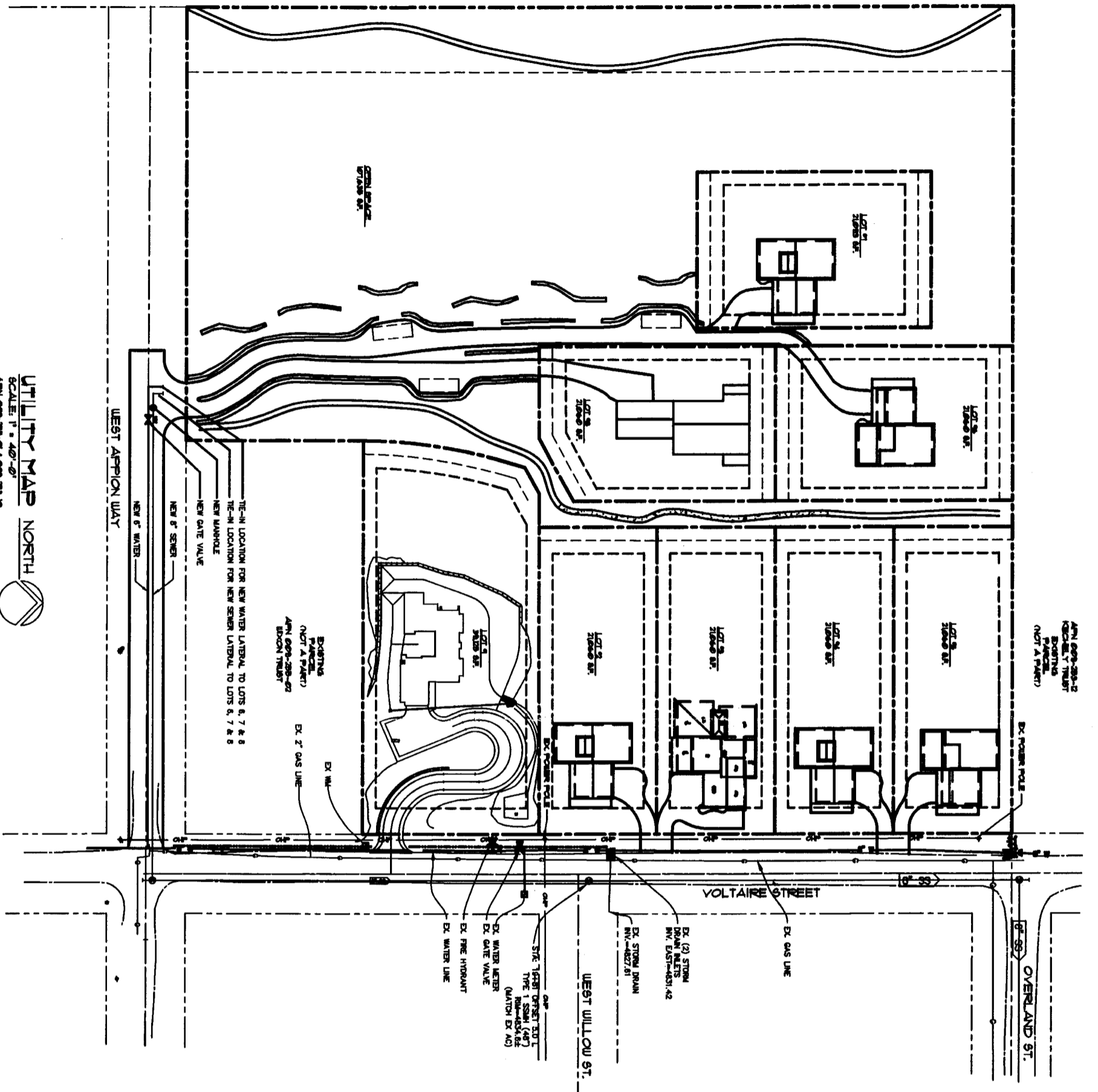
BBA CONSULTING LLC  
180 W. RYE LIL SUITE 700  
CARSON CITY, NEVADA 89706  
(775) 882-1801  
(775) 882-1878 FAX



DRW BY: BMS/MSH CHK BY: BMS/MSH

REVISIONS	
NO.	DESCRIPTION

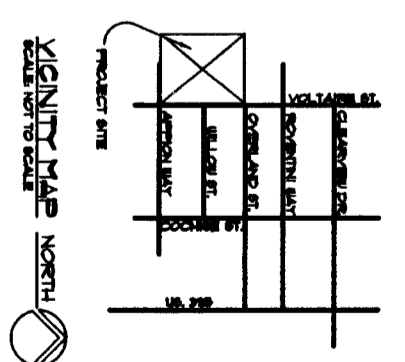
ISSUE DATE:	1-25-09
DWG NO.:	
DRAWN BY:	
CHECKED BY:	
SCALE:	1"=40'
SHEET NO.:	34-1



**UTILITY MAP NORTH**

SCALE: 1" = 40'-0"

APN 009-288-01 & 009-288-10  
APN 009-288-02  
APN 009-288-03  
APN 009-288-04  
APN 009-288-05  
APN 009-288-06  
APN 009-288-07  
APN 009-288-08  
APN 009-288-09



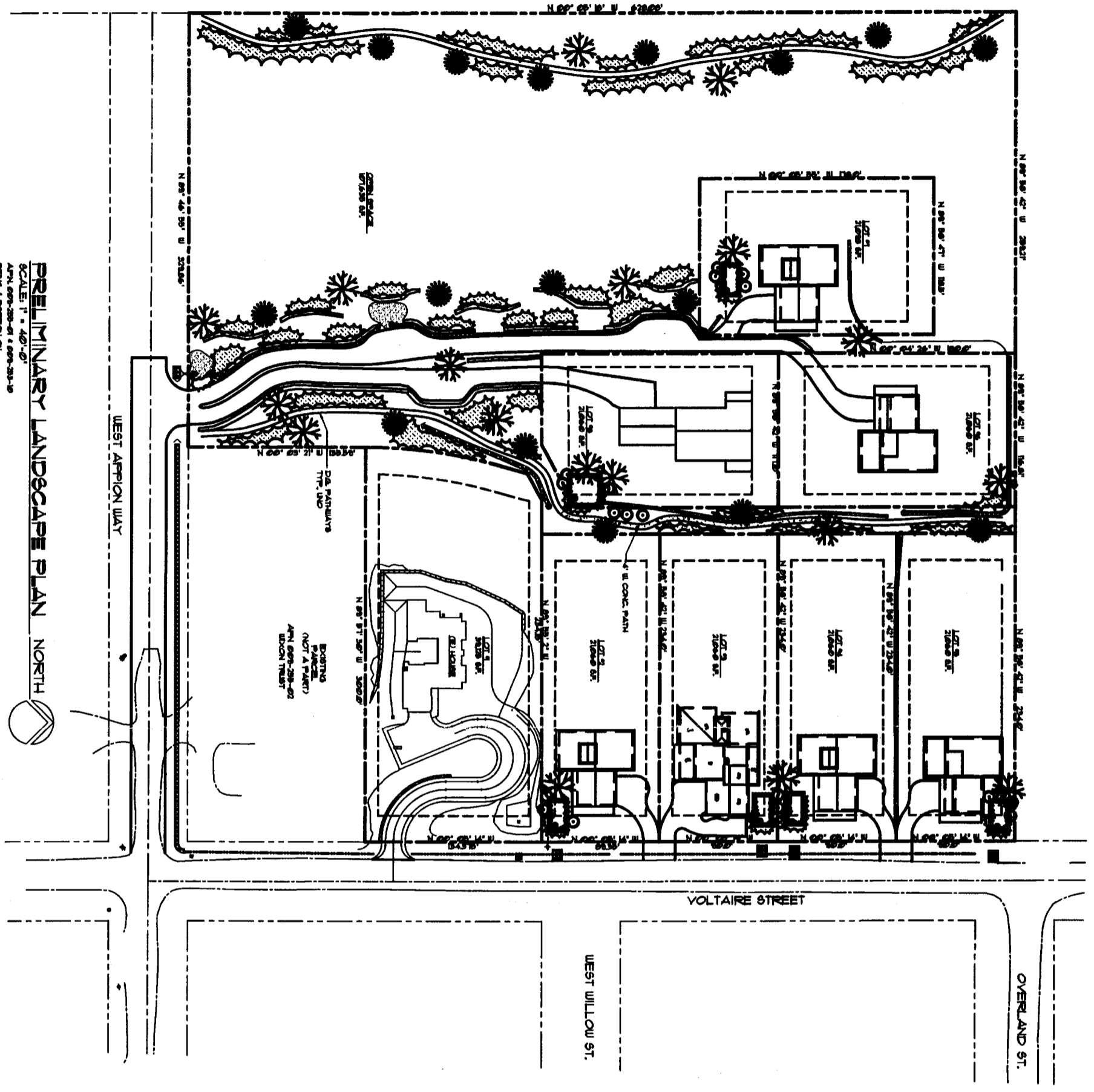
<p><b>UTILITY MAP</b> <b>CITY VIEW GREEN HOMES</b></p>		<p>DBA CONSULTING LLC 180 W. WYE LANE SUITE 700 CARSON CITY, NEVADA 89703 (775) 895-1991 (775) 840-7470 FAX</p>		<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	BY	DESCRIPTION																																				
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<p>DATE DATE: 1-29-08</p> <p>JOB NO.:</p> <p>DWG. NAME:</p> <p>SCALE: 1"=40'</p> <p>SHEET NO.: 08-1</p>	<p>DRW BY: BMS/MSH</p> <p>CHK BY: BMS/MSH</p>	<p>DATE</p> <p>BY</p> <p>DESCRIPTION</p>	<p>DATE</p> <p>BY</p> <p>DESCRIPTION</p>																																									

**PRELIMINARY LANDSCAPE PLAN NORTH**

SCALE: 1" = 40'-0"

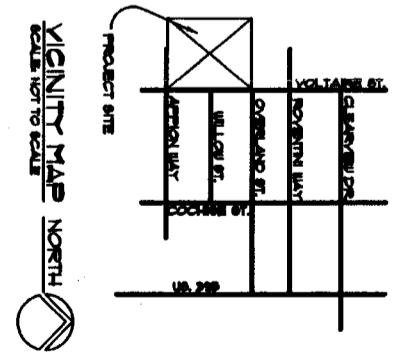
APN: 009-238-01 + 009-238-10

REVISIONS A PORTION ON  
 WILLIAMS SECTION IN  
 T1N, R23E, E17DBM



**PLANT LEGEND**

TYPE	SYMBOL	SPECIES	SIZE
EVERGREEN TREE		SPECIES TO BE DECIDED	6 FT.
DECIDUOUS TREE		SPECIES TO BE DECIDED	8 OAL.
SHRUB		SPECIES TO BE DECIDED	5 OAL.
GROUNDCOVERS		SPECIES TO BE DECIDED	1 OAL.



DATE:	1-22-09
DESIGNER:	
SCALE:	1"=40'
SHEET NO.:	1-1

**PRELIMINARY LANDSCAPE PLAN  
 CITY VIEW GREEN HOMES**

BSA CONSULTING LLC  
 100 W. NYE LBL SUITE 700  
 CARSON CITY, NEVADA 89706  
 (775) 885-1801  
 (775) 848-7470 FAX

DRW BY: BMS/MSH    CHK BY: BMS/MSH



REVISIONS		
NO.	DATE	DESCRIPTION

## Tentative Map Questionnaire

### City View Green Homes Subdivision

This proposed development is for the construction of eight single family homes on a property zoned SF1A, which because of previous existing grading techniques, is an "eye sore" scar on the side of the hill.

The proposal is to allow for eight smaller lots in a cluster arrangement thus providing for re-grading and landscaping enhancements to result in a visually pleasing development.

1. The Development Checklist is as follows:

A) Chapter 3 – Balanced Land Use Pattern

The development is consistent with the Master Plan Land Use Map in location on Voltaire St. and Appion Way and density with 1 dwelling unit per acre.

The project meets the requirements of the Growth Management Ordinance. The current zoning is SF1A but since a majority of the site is too steep to development, the proposed plan is to allow the same number of dwelling units, under the current zoning, but reduce the size by the allotted 33% min.

The development is totally based on sustainable, energy efficient construction and the use of green building materials. All the homes will be designed utilizing passive heating and cooling principles and the landscaping will be low impact designed xeriscapes, thus promoting water conservation.

The development is not located in a priority infill development area. There will be pathways and pathway easements established to maintain access to public lands along with pathways in open space areas within the development that will also have access to adjacent public lands.

By utilizing smaller lots in the development the cluster development technique will be utilized. There are no existing site features to protect.

The development is compatible with the adjacent properties on three sides that are residential and has access to the open space on the fourth side.

This project has been through a Conceptual Review and all Engineering, Utility and Fire Dept. concerns will be address and incorporated into the plan. The school district addressed the impact in the Conceptual Review with no adverse impact.

The development is not in a Mixed-Use Area.

There will be three different floor plan models with multiple elevation looks for each model and will be located to provide variety in the development.

The development will not encroach on environmentally sensitive areas and will have dedicated access easements to open space.

There will be multiple access points for access to open space at the urban interface, defensible space will be provided for and construction materials will be fire resistant insulated concrete form with stucco finish and Class A fire rated roofing material.

The property is not within a primary flood plain or geologic hazard area. All levels of service (i.e. water, sewer, road improvements & power) will be provided for per the comments from the Conceptual Review meeting. The property is not within a Specific Plan Area.

#### Chapter 4 – Equitable Distribution of Recreational Opportunities

Pathways and pathway easements will be incorporated in the development with access to Open Space. The Carson River Master Plan is not affected.

#### Chapter 5 – Economic Vitality

The development will provide walking trails with access to open space, new landscaping to provide visual vitality to the area and quality homes, which will improve the residents' quality of life.

The downtown area will not be directly affected.

#### Chapter 6 – Livable Neighborhoods & Activity Centers

The development will provide lots of varied sizes and in varied orientation with home size, color, location and style varied to provide visual interest. The homes will incorporate varied facades and entries along with walking paths in common open space areas. Landscaping will be enhanced to rejuvenate the site from the current state, which is not visually pleasing. The location and size of the houses will be varied along with the connectivity to surrounding development.

The property is not located in a Mixed-Use Activity Center area.

The property is not located downtown.

Housing mix and density are not applicable to this project.

#### Chapter 7 – A Connected City

The Appion Way extension project will be a bonus to the development by providing additional travel options into and out of the area.

The addition of walking paths in and through the development will be consistent with the Unified Pathways Master Plan.



## Open Space Development Standards

### City View Green Homes Subdivision

#### 17.10.005 – Purpose

This development will include a variation of lot orientation with density transfer in order to preserve open space and achieve a more efficient use of the property by not developing areas in excess of 33% slope. There will be a mix of housing types with no new roads (only driveways) being constructed with the exception of an extension to the existing Appion Way to access the upper elevation of the site.

#### 17.10.010 – Applicability

There is common open space proposed for this development.

#### 17.10.015 – Application

A tentative subdivision map is being prepared with proposed common open space in the development.

#### 17.10.020 – Non-residential uses

There will be no non-residential uses.

#### 17.10.025 – Density and intensity standards

The total number of dwelling units, (8), does not exceed the number of units allowed by the underlying zoning district.

The gross site area will include eight parcels, in addition to the common open space, all in the same geographical vicinity with the majority being contiguous. The height standards for the zoning district will be maintained, however due to the floor plan configuration of the homes, (stepping up and into the hillside) the "ground plane" as described in the International Residential Code will be used in determining building heights.

#### 17.10.030 – Lot and yard standards

The min. 33% reduction in lot size will be applied to the current SF1A zoning resulting in a min. lot size of 21,060 S.F.

The lots as shown range in size from 39,125 S.F. to 21,060 S.F.

The minimum lot width of 80 Ft. and setbacks of Front & Rear – 20 Ft. and Side – 10 Ft., as shown in this section, will be utilized.

The smaller lot width is needed to be able to cluster the homes in the areas that are buildable (less than 33% slope) and not as a means of creating a more dense subdivision. The maximum number of lots will conform to the underlying zoning classification.

17.10.035 – Site analysis to determine common open space and lot size variations.

A site analysis has been prepared and is shown on sheet SA-1.

17.10.040 – Roads

Common driveways will be utilized for access and will be aligned with the natural topography as much as possible.

17.10.045 – Parking

All homes will have a min. 2 -car garage with most having a 3-car garage thus complying with the required 2 spaces per dwelling unit. All other applicable requirements of Development Standards Division 2 will be adhered to.

17.10.046 – Open Space

The minimum 250 square feet of open space per dwelling unit will be provided on each individual lot by means of utilizing private yard areas as well as roof decks and patios incorporated into the home design. In addition, common open space is provided in the development along common pathways, trails and un-developed areas.

17.10.050 – Conditions of approval

Covenants, Conditions and Restrictions are being prepared and will include: Three-Year Maintenance Plan addressing vegetation Management, watershed management, debris and litter removal, fire access and suppression, maintenance of public areas; Permanent Preservation and Maintenance; Screening and Buffering of Adjoining Development; Common Open Space Restrictions along with other items deemed necessary.

## Hillside Development Standards

### City View Green Homes Subdivision

#### 7.1 – Purpose

This development, because the average slope is greater than 15%, will comply with the Hillside Development Standards.

#### 7.2 – Applicability

Calculation of average slope:

Lot #1 – Highest contour @ 4915' less Lowest contour @ 4850' = 65' divided by distance between contours (perp. to slope) = 274' = 23.7% average slope.

Lot #2 – Highest contour @ 4910' less Lowest contour @ 4845' = 65' divided by distance between contours (perp. to slope) = 229' = 28.3% average slope.

Lot #3 – Highest contour @ 4920' less Lowest contour @ 4848' = 72' divided by distance between contours (perp. to slope) = 230' = 31.3% average slope.

Lot #4 – Highest contour @ 4918' less Lowest contour @ 4850' = 68' divided by distance between contours (perp. to slope) = 227' = 29.9% average slope.

Lot #5 – Highest contour @ 4919' less Lowest contour @ 4852' = 67' divided by distance between contours (perp. to slope) = 230' = 29.1% average slope.

Lot #6 – Highest contour @ 4958' less Lowest contour @ 4925' = 33' divided by distance between contours (perp. to slope) = 114' = 28.9% average slope.

Lot #7 – Highest contour @ 5002' less Lowest contour @ 4965' = 37' divided by distance between contours (perp. to slope) = 116' = 31.8% average slope.

Lot #8 – Highest contour @ 4960' less Lowest contour @ 4910' = 50' divided by distance between contours (perp. to slope) = 178' = 28% average slope.

#### 7.3 – Engineering Reports and Responsibilities

The project engineer will prepare grading plans, written reports and all other items required by this section. Project engineer will coordinate with the Building Department and the city engineer and provide all certifications as required in Section 7.3.1.

All portions of construction with regards to drainage and any alterations to FEMA defined flood-ways will comply with Section 7.3.2

Grading plans shall comply with Appendix J, Chapter 18 of the current Building Code and will be submitted with the development applications.

There will be no development on natural slopes in excess of 33%.

All fill material and cuts and fills will comply with Section 7.3.3.

A slope stabilization and re-vegetation plan will be submitted with the grading plan and will comply with all requirements of Section 7.3.4.

A topographical map will be prepared and shall comply with the requirements of Section 7.3.5.

All parking and driveways will be designed to meet the requirements of Section 7.3.6.

All new permanent service utilities will be placed underground.

#### 7.4 – Buildable Area

All individual lots will be developed to meet the requirements of Sections 7.4.1 and 7.4.2.

All houses in the development are being designed to step up or down the slope as is appropriate for the particular lot thus minimizing grading, cuts and fills and the amount of re-vegetation required. All other requirements of Section 7.4.3 will be followed.

#### 7.5 – Open Space

There will be no development on the natural steeply sloping terrain in excess of 33%.

Open space areas and pathway easements have been included in the development to comply with Section 7.5.2.

The scenic quality will be protected and enhanced by preserving the natural vegetation as much as possible, preserving natural drainage channels with devices, fixtures, swales and retention basins and replanting vegetation as well as adding additional landscaping to provide more beauty than already exists.

#### 7.6 – Fire Protection

All lot and house locations will be situated such that the clearance of flammable vegetative cover can be accomplished.

Any firebreak easements shall meet the requirements of Section 7.6.2.

All developed areas will comply with Section 7.6.3. Long driveways have been designed with turn-outs, there will be non-combustible building materials used on the exterior of all houses, there will be spark arrestors used, if required, and fire resistant plant species will be used in the landscape design of the individual houses.

The use of 4" high numbers will be used for addresses.

All other requirements of Sections 7.6.5, 7.6.6 and 7.6.7 will be followed.

#### 7.7 – Maintenance

All required maintenance as described in Section 7.7.1 would be included in the C.C.&R's.

### 7.8 – Additional Requirements for Subdivision Maps

Average slope of Subdivision:

$(0.0023 - \text{constant variable}) (1' - \text{contour interval}) (631.67' - \text{summation of length of contours}) \text{ divided by } (8.1 - \text{area in acres of parcel}) = 18\% \text{ average slope.}$

A slope analysis map has been prepared and included.

All other requirements of Section 7.8.2 will be provided for.

The lot setbacks and grading have been taken into account when determining house location and height so as not to obstruct views from one lot to another.

The fire department had no comment with regards to fire line water pressure during the Conceptual Review process for this development.

Permanent undeveloped open space has been designed into the development.

All other requirements of Section 7.8.6 will be included in the C.C.&R's.

### 7.9 – Roadways

Requirements concerning grading, cuts and fills, retaining walls and other items contained in Sections 7.9.1 – 7.9.4 have been added to the grading plan.

There are no new roadways proposed for this development with the exception of an extension of the existing Appion Way to access the upper elevation of the site.

### 7.10 – Setbacks

A 30' defensible space will be established around all homes.

No accessory structures will be allowed in the required setbacks.

No homes will be built at the top of a slope.

## Fuels Management Plan

### City View Green Homes Subdivision

#### Introduction

This plan, prepared for the City View Green Homes Subdivision, follows the guidelines found in chapter 14.04 of the Carson City Municipal Code.

The objective is to present guidelines to be incorporated into and maintained by the owners of the development. These guidelines include modifying the fuel bed to the extent that a high intensity, fast moving fire would be curtailed, preparing defensible space requirements, providing guidelines for re-vegetation and additional fire resistant landscaping and other items required for the protection of the development and the surrounding area.

#### Current Site Characteristics

The site is currently covered with sagebrush and small amounts of grass fuel types. There are no trees on the site.

The majority of the grass fuel type is in the areas that were previously graded with some sagebrush having re-established it self.

According to the Nevada Community Wildfire Risk/Hazard Assessment Project prepared by Resource Concepts Inc. in 2005, there have been no major fires across this site in the last 20 years and the site is in an area with a fuel hazard classification of moderate.

#### Fuel Management

The CC&R's for this development should include guidelines for the management of fuels in the developed and undeveloped common areas within the development. These guidelines should include maintaining a firebreak located in conjunction with the 50' W. pathway easement to be established on the West boundary of the property. This area should be landscaped with fire-resistant plant species and a seed mix of fire-resistant grasses similar to the re-vegetation used after the Waterfall Fire. The same guidelines should be used in maintaining the pathway easement that is at a point midway through the development.

The CC&R's should also include provisions for each homeowner to provide a minimum 30' defensible space around the perimeter of the house and to require the use of fire-resistant plant species in the landscape design of the property. In addition, all areas disturbed by grading shall be re-vegetated with the approved fire-resistant seed mix and requirements of Carson City Municipal Code Section 14.04.025 shall be included and followed.

### Access

All-weather surfaced driveways shall be provided to each home. Driveway shall be a minimum of 12' W. A driveway shall not serve more than 2 homes. Driveways in excess of 200' shall have turnouts located as required by the fire chief. Turnouts shall be 30'Lx10'W.

### Water supply and fire sprinkler systems

Any home located more than 1000' from an approved water supply, measured along an approved fire access road, must comply with Section 14.04.015 of the Carson City Municipal Code.

### Building Construction

All roof coverings must be Class A rated, as defined by the International Building Code.

All eaves must be enclosed on the underside with a minimum ½" nominal thickness solid sheathing material.

Appendages and projections, such as decks, must be tight-fitting wood of 2" nominal thickness lumber or an approved equal or constructed of noncombustible material. The exposed surface must be tight fitting. The area beneath a first floor projection must be enclosed to within 6" of the natural grade.

Chimneys serving fireplaces, barbeques, incinerators or decorative heating appliances in which solid or liquid fuel is used must have a spark arrestor. The arrestor shall be constructed of woven or welded wire screening of 12 USA standard gauge wire having openings not larger than ½".

### Fuel material storage

Storage of liquefied petroleum gas and fuel material shall comply with Section 14.04.035 of the Carson City Municipal Code.

**PRELIMINARY  
DRAINAGE REPORT**

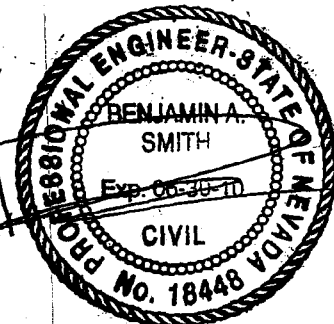
FOR

**DEVELOPMENT  
OF  
CITY VIEW GREEN HOMES SUB  
VOLTAIRE ST  
CARSON CITY, NEVADA  
(APN 009-255-01 & 009-253-10)**

BY:

**BSA CONSULTING  
125 W. Nye Ln.  
Carson City NV 89706  
PH:775-815-1691**

JAN 2009



1-23-09



## INTRODUCTION

The subject parcel is located in the southwest portion of Carson City on the west side of Voltaire St between the projection of Overland Street on the north and W. Appion Way on the south. It extends about 630 feet to the west and encompasses about 8.1 acres of previously undeveloped land. There is a single residence at the SE corner of the site and another north of the site. Otherwise, adjacent parcels are undeveloped. There is no street or other improvement west of the site to the top of the contributing drainage basin.

The owner of this currently undeveloped parcel proposes to develop it with the construction of 8 single family residential units utilizing unique construction methods that minimize earth disturbance and offer maximum 'green' benefits in both structure construction and site grading/landscaping. Construction of each residence will include on-site detention of run-off to insure post development run-off equal to pre-development conditions for the design storm event. Site improvements and grading will perpetuate flow patterns as much as possible. Drainage easements will be dedicated to convey runoff in a pattern that attempts to mimic existing flow regime.

There will be 5 lots that front onto Voltaire St. Their runoff will flow into existing roadside ditches on Voltaire St. There will be 3 lots on the interior of the site having a relatively long driveway access from W Appion Way. The run-off from these 3 lots will be conveyed to detention basin(s) and then conveyed easterly to Voltaire St. The driveway noted above will intercept sheet flow from the west and convey it to two driveway detention basins. The outflow from these basins will then be conveyed through a series of pipes and swales to W Appion Way and/or Voltaire St.

Access to the site will be from Clearview Dr and/or Overland Dr. to Voltaire St. and W Appion Way. Utility services exist, or will be constructed before this project begins, in Voltaire St and will provide service to these homes along the public Rights-of-Way and/or thru dedicated utility easements.

Reference documents for this report include the USDA-SCS Soil Survey for Carson City, the current FEMA-FIRM maps for this area, historic intensity-duration graphs for local precipitation rates, USGS quadrangle maps and numerous published texts.

Calculations have been prepared for the 5-yr 24-hr event for sizing all drainage improvements on-site and the 25-yr 24-hr event for improvements within the public Right-of-Way as a minimum. In some cases, the 100-yr 24-hr event has been substituted to demonstrate conveyance within proposed improvements and protection to the residences on- and off-site.

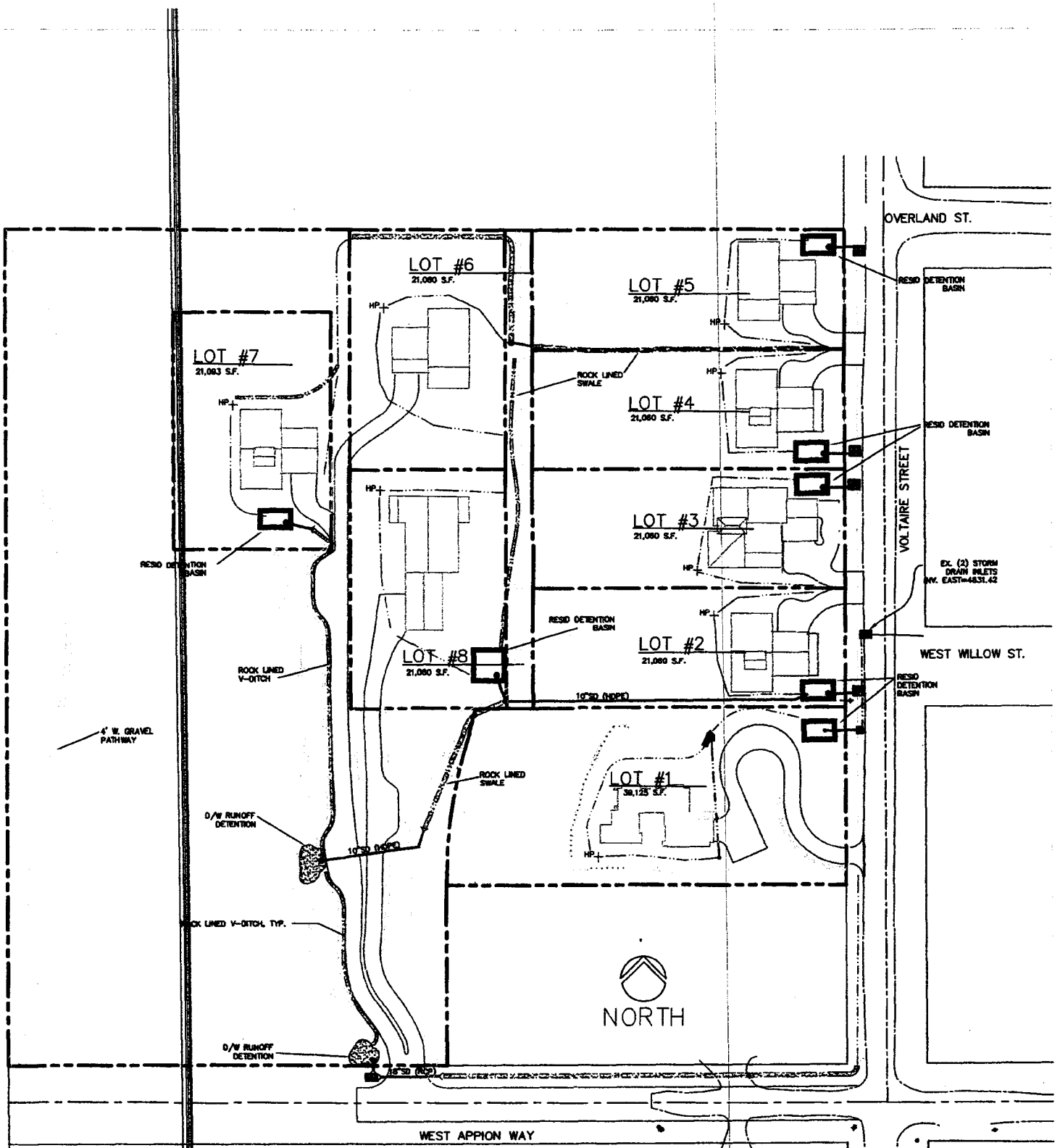


PLATE 1

## EXISTING HYDROLOGY

The site lies completely in FEMA Flood Zone D as shown on Panel 3200010094E and 3200010207E. Zone 'D' is an area where flood hazards have not been determined. However, the contributing drainage basin to this site extends to only about 1500 feet westerly of the site and there are no defined drainage channels or paths across the site. Existing well defined channels are not evident or through the site. It is this author's opinion that significant concentrated flows on-site are unlikely although sheet flow or rivulet flow can be anticipated.

The natural ground slope is nearly uniform across the site down to the east-southeast at an average of about 29%. However, it flattens above the site to an average of about 16% to the top of the drainage basin.

Voltaire Street across the easterly boundary is a paved road with earthen roadside ditches. W. Appion Way is a partially improved travelway to about 300 feet west of Voltaire St and has poorly defined roadside ditches along this section. Voltaire Street slopes down to the south at about 1.5% from Overland Street to a low point at the projection of the Willow Street alignment. Then it slopes up to the south at about 1.5% to W Appion Way. W Appion Way slopes down to the east at about 8-12% for the section considered herein.

Runoff appears to sheet flow across the site and is collected in roadside ditches on Appion Way and on Voltaire St where it is conveyed to a single drop inlet on the west side of Voltaire St near the projection of the north R/W line of Willow St. The runoff then flows easterly across Voltaire St in a CMP culvert and into a sinuous drainage approximately along north R/W line of the unimproved Willow St.

Site soils are defined on the USDA-SCS Soil Survey of Carson City as #60 'Surprise' soils and #70 'Toll' soils. The Surprise soils are described as 'sandy loams' and underlay the east and southeasterly 70% of the site. The Toll soils are described as 'gravelly loamy sand' and underlay the west and northwesterly 30% of the site. The Toll soils also extend farther west to at least the limits of the drainage basin contributing to this site. The Surprise soils have a Hydrologic Group designation of 'B' while the Toll soils have group reference of 'A'.

The proposed site is about 8.1 acres. The contributing drainage basin westerly of the site is about 6 acres. Based on the size of the drainage basin and the preliminary status of this report runoff calculations have been prepared utilizing the Rational Formula.

We have assumed a Runoff factor 'C' for the native soils to be 0.35 for the Surprise soils on-site and 0.30 for the Toll soils on- and off-site. Average 'C' is calculated to be 0.31. We have further assumed a triangular run-off distribution during the design event with no flow at the beginning or end and the peak flow occurring somewhere near the middle of the storm duration. Run-off volume has then been estimated to be the area under that triangular distribution.

Design flow to W Appion Way is calculated to be 0.7 cfs for the 25-yr 24-hr event and increases to 0.8 cfs for the 100-yr event. This flow is easily conveyed in the existing poorly defined roadside ditch. Flow to the southerly end of Voltair St is only slightly more and again is easily contained in the better defined ditch on this street. The drop inlet at mid-block described previously has adequate capacity to convey the existing runoff if kept clean.

## PROPOSED HYDROLOGY

No significant drainage conveyances cross this site nor is the site within a defined FEMA flood plain. Therefore, we have not prepared a drainage analysis for flows across the site, nor are there improvements proposed for conveyance of off-site flows across or thru the site except as described below.

Development proposes construction of 8 single family homes on this 8.1 acre site. Construction activity will be confined to only the areas needed for structure construction and front yard landscaping. A majority of the entire site will be undisturbed and left in its existing condition.

Each residential site will include about 3000 square feet of structure footprint and about another 1000 square feet of driveway, ignoring the long driveway to Lots 6, 7 and 8 from W Appion Way. There will also be about 2000 square feet of landscape area for each lot. The landscape area will be predominantly planted with native shrubs and grasses or similar items and include an area for on-site detention of 'excess run-off'. Excess run-off is the amount of run-off calculated for the design storm event due to development of each site.

We have calculated a pre-development run-off for each residence to be about 0.032 cfs with a post development run-off of about 0.036 cfs. Based on these calculations, each residence should include about 175 cubic feet of liquid storage with a controlled outflow not to exceed 0.032 cfs. Each basin should include a spillway conveyance for the 100-yr 24-hr event of 0.07 cfs. The outflow can be conveyed in a stabilized earthen swale or through a 6-inch diameter storm drain. Storm drains should be made of HDPE where possible to reduce the effects of erosion with sand laden run-off. Note that we have excluded the portion of the long driveway from W Appion Way in the design consideration for the individual lot detention basins. Separate basins are provided for the driveway run-off as described below.

Runoff from contributing off-site areas to the west (upstream) of the site can be separated into 3 sub-areas. One south and west of the driveway terminus at W Appion Way, one north of Lot 7, and one between these two. The most southerly sub-area encompasses a triangular shape extending from the west side of the driveway at W Appion Way, then to the SW corner of the site, then to the top of the drainage basin about 1500 feet west of the site, and back to the point of beginning. This covers an area of about 1.5 acres, on- and off-site. Flows from this sub-area are calculated to be about 0.08 cfs for the 100-yr 24-hr event and will cross only the southwesterly portion of the site and into the W Appion Way roadside ditch. This area will not be disturbed by construction and no change to this flow regime is proposed.

The sub-area north and west of Lot #7 and extending westerly to the basin terminus is also an area that will not be disturbed by this development. Overland flow from this sub-area will be collected in a local earthen swale northeast of Lot 8 and conveyed in a series of swales and storm drains to Voltaire St. The contributing area of this sub-basin encompasses about 2.5 acres on-and off-site and has been calculated to have a maximum flow of about 0.12 cfs for the 100-yr 24-hr event.

The balance of the off-site drainage basin contributing flow to the interior portion of the site encompasses about 5.5 acres on- and off-site. The proposed driveway to Lots 6, 7 and 8 will effectively intercept flow from this drainage area. It will be collected in roadside ditches and conveyed to detention basins before being released to on-site storm drains and earthen swales. Run-off contributing to the northerly 300 feet or so would be about 0.11 cfs for the 5-yr 24-hr event in the existing conditions, and will increase to about 0.12 cfs for the developed condition when considering the effects of the impervious pavement. A detention basin for this flow should have a liquid storage volume of about 432 CF and a controlled outflow for not more than 0.11 cfs. An overflow into the storm drain should be design to convey up to 0.23 cfs, the 100-yr 24-hr run-off.

The storm drain from the basin described above should be at least 10-inches in diameter to facilitate cleaning and other maintenance and be comprised of HDPE pipe. Where conveyed by earthen swale to the SE corner of lot 8, the swale should be stabilized with rip-rap having a minimum size of 6" and be underlain with a geotextile filter fabric designed for this use. The pipe from the corner of Lot 8 to Voltaire St may experience a 100-yr 24-hr flow of 0.44 cfs after including flows from on-site detention basins on Lots 6, 7 and 8. This pipe will be in some cases very steep approaching 30% and may flatten to as little as 5%. It should be at least 10-inches in diameter for maintenance and conveyance and be comprised of HDPE material to reduce the effects of erosion. This pipe should also be water tight and/or have strategically placed cut-off walls to preclude erosion in the storm drain trench.

Run-off to the southerly 160 feet of the long private driveway would be about 0.053 cfs in an undeveloped condition and increase to about 0.058 cfs for the developed condition when considering the impervious pavement. Flow should be directed from both sides of the driveway into a basin with a minimum liquid volume of about 224 CF and a controlled outlet not more than 0.53 cfs. An overflow should be included for a 100-yr 24-hr event flow of 0.20 cfs.

Native soils may be very susceptible to erosion and all earthen swales steeper than about 2% should be stabilized with rock rip-rap having a minimum size of 6" and be underlain with a geotextile fabric. The W Appion Way roadside ditch should be stabilized as described; however, the existing (or improved) roadside ditch along Voltaire St at about 1.5% should not require rock stabilization.

## CONCLUSION

The project site encompasses about 8.1 acres. The site is in an area defined by FEMA as Zone 'D' where flood hazards have not been determined. There are no defined drainage paths across the site.

The ground surface slopes up to the west past the westerly boundary. Flows from that area will cross the site. The drainage basin contributing flow toward this site is about 6 acres in size and is un-developed. Its terminus is about 1500 feet westerly of the site.

Site development will not disturb on-site areas west of the long private driveway that extends from W Appion Way to Lots 6, 7 and 8 except for construction of the retaining walls and drainage facilities shown on the Tentative Map for this development and Lot 7 development. Run-off from the off-site area and on-site area west of that driveway, except for individual lot run-off from Lot 7, can be divided into 3 sub-areas. The most southerly sub-area flows directly into the W Appion Way R/W and will be un-changed by this development. The most northerly sub-area north of Lot 7 will not be impacted by development except to be collected on-site and conveyed in a series of swales and storm drains to Voltaire St.

Run-off from the sub-area contributing flow to the driveway between W Appion Way and Lot 7 will be intercepted by the private driveway. That run-off will be combined with run-off from the driveway and directed to two detention basins on the west side of the driveway, each having a controlled outflow to a series of swales and storm drains and an overflow sized to convey the 100-yr event. Outflow from these two basins will be conveyed in a series of pipes and swales to Voltaire St.

All residences will include construction of individual or combined detention basins sized to store run-off from the 5-yr 24-hr event while releasing pre-development run-off rates. All basins will include overflow provisions for the 100-yr 24-hr event.

Site soils may be highly erodable. All drainage swale steeper than about 2% should include rock rip-rap lining with an underlayment of filter fabric.

Run-off from this site will not be increased for the 5-yr 24-hr event from pre-development conditions and can be conveyed by the existing drop inlet and culvert in Voltaire St if properly maintained. Existing roadside ditches with a minimum depth of about 1-foot will be adequate to convey run-off from the design events as presented.

**APPENDIX**



CITY VIEW GREEN HOMES  
VOLTAIRE ST  
CARSON CITY NV

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## PROJECT SITE

LOCATION: VOLTAIRE ST. - W SIDE BETWEEN  
APPION WY AND OVERLAND ST.  
(WILLOW R/W PREV. ABANDONED)

PARCEL SHAPE IS NEARLY A 630'± SQUARE  
EXCEPT FOR ONE RESIDENTIAL PARCEL  
IN THE SE COR (300' X 135')

PROJECT AREA  $\approx$  361,400 SF  $\approx$  8.1 AC

LAT: 39° 07' 33" N  
LONG: 119° 46' 30" W

VOLTAIRE IS PAVED W/ ROADSIDE DITCH  
ON WEST SIDE. ONE SD-CB EXISTS  
NEAR ABANDONED R/W OF WILLOW ST -  
FLOWS IN 18" (?) CMP EAST ACROSS  
VOLTAIRE ST INTO EX DRAINAGE CHANNEL  
IN OLD WILLOW ST R/W.

OVERLAND ST AND WILLOW ST R/W'S  
HAVE BEEN PREVIOUSLY ABANDONED AND  
THOSE AREAS ARE UN-IMPROVED

APPION WAY ON THE SOUTHERLY BOUNDARY  
IS PARTIALLY IMPROVED WITH ROAD-SIDE  
DITCHES POORLY DEFINED TO ABOUT 300'  
WEST OF VOLTAIRE ST.

PROJECT SITE IS UN-IMPROVED (OR  
ASSUMED TO BE) AND IN A NATURAL  
CONDITION W/ A MEDIUM-TO-HEAVY  
OVER-GROWTH OF SAGEBRUSH, BITTER BRUSH,  
NATIVE GRASSES AND OTHER NATIVE  
VEGETATION

CITY VIEW GREEN HOMES  
VOLTAIRE ST  
CARSON CITY NV

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PROJECT SITE (CONTINUED)

SITE SLOPES DOWN TO THE EAST AT 30%

SITE SOILS ARE DEFINED IN THE USDA-SCS  
SOILS REPORT FOR CARSON CITY AS

- # 60 (Surprise Sandy Loams) AND
- # 70 (Toll Gravelly Loams)

\* 60 SURPRISE SOILS (≈ 6 ACRES)

- ≈ 70% OF SITE
- ≈ 43% OF TOTAL DRAINAGE BASIN

\* 70 TOLL SOILS

- ≈ 30% OF SITE
- ≈ 57% OF TOTAL DRAINAGE BASIN
- ≈ 100% OF OFF-SITE BASIN AREA

42,382 100 SHEETS 5 SQUARE  
42,385 200 SHEETS 5 SQUARE  
MADE IN U.S.A.

NATIONAL

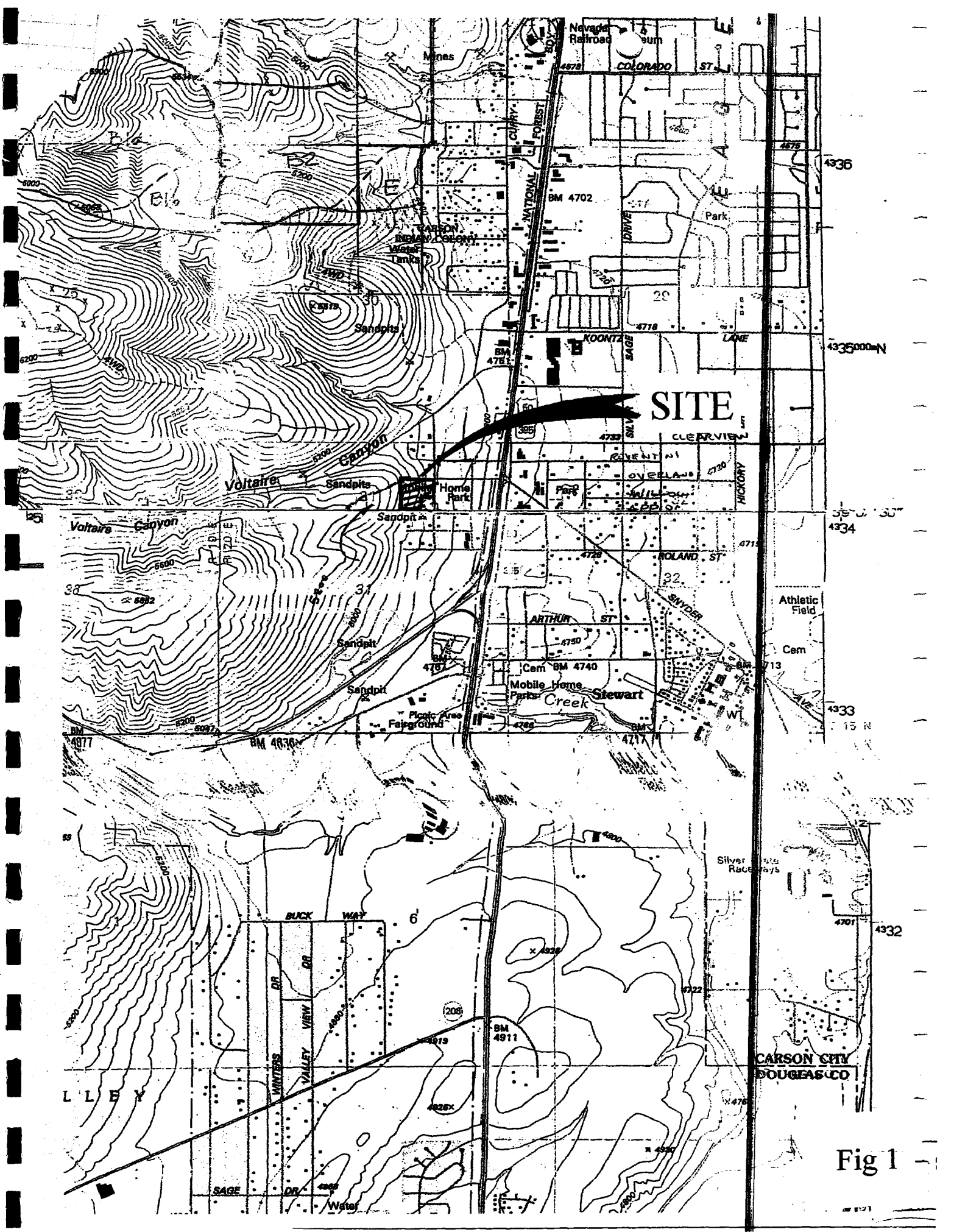
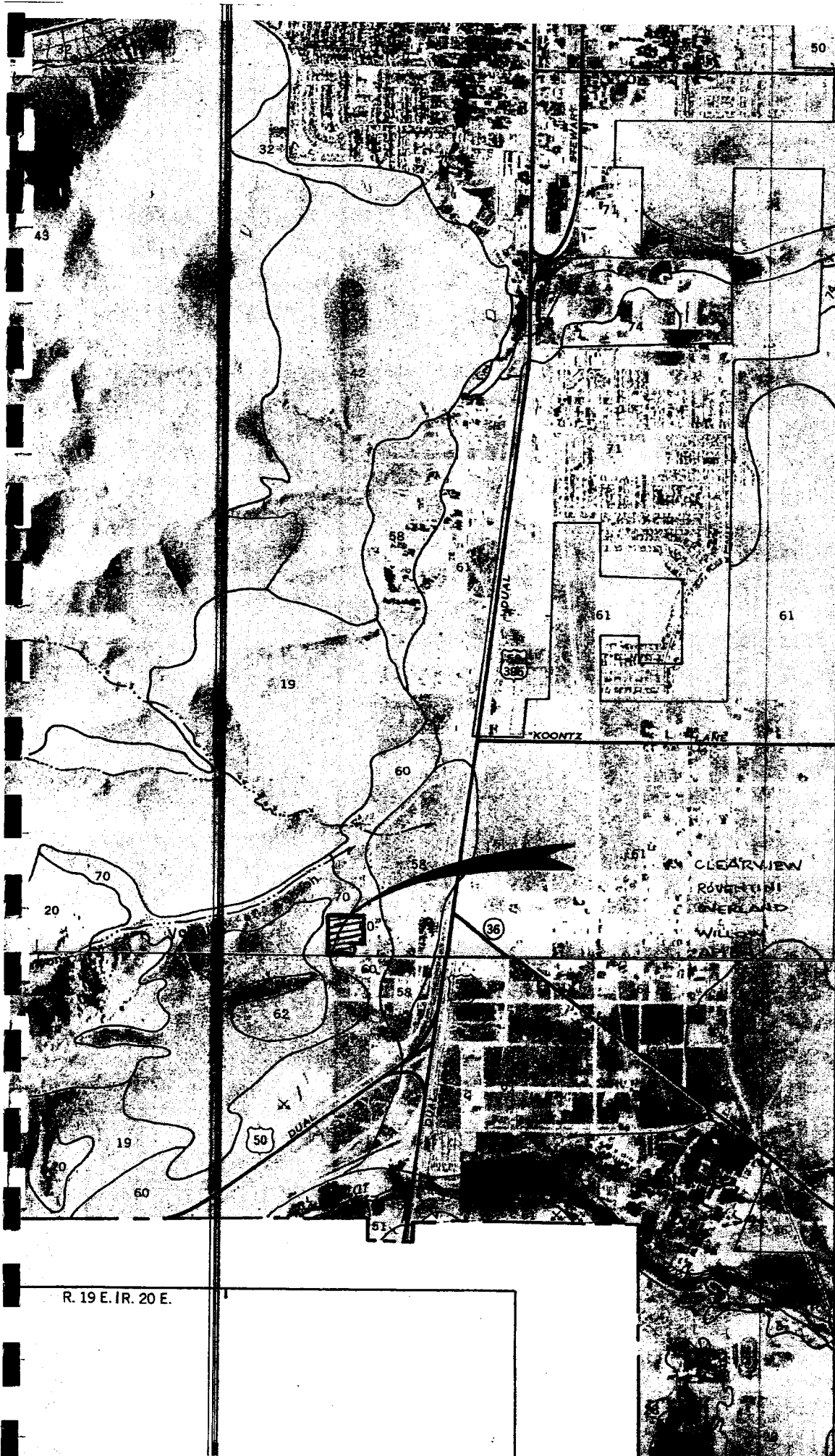


Fig 1



1 595 000  
FEET

T. 15 N.  
T. 14 N.

1 590 000  
FEET

R. 19 E. IR. 20 E.

Fig 2

CARSON CITY AREA, NEVADA

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TABLE 13.--ENGINEERING PROPERTIES AND CLASSIFICATIONS--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
Surprise: 60	0-15	Sandy loam	SM	A-1, A-2	0	75-90	75-85	40-55	20-30	15-25	NP-5
	15-37	Stratified coarse sandy loam to gravelly loam.	SM	A-1	0-5	70-90	50-85	30-50	15-25	20-30	NP-5
	37-60	Stratified loamy sand to gravelly loam.	SM	A-1	0-5	70-90	50-85	30-50	10-25	15-25	NP-5
Toll: 70	0-15	Gravelly loamy sand.	SM	A-1	0	85-90	60-75	35-50	10-20	---	NP
	15-60	Loamy sand	SM	A-2	0	95-100	95-100	50-60	15-25	---	NP

CARSON CITY AREA, NEVADA

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TABLE 15.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydro-logic group	Flooding			High water table			Bedrock		Cemented pan	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness	Depth	Hardness
					Ft			In			
Surprise: 58, 59, 60, 61	B	Rare	---	---	>6.0	---	---	>60	---	---	---
Toll: 70	A	None	---	---	>6.0	---	---	>60	---	---	---

Fig 3

CITY VIEW GREEN HOMES  
VOLT AIR ST  
CARSON CITY NV

1/22/09  
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## HYDROLOGY CALCULATIONS

SITE AREA:  $\approx$  8.1 ACRES

DRAINAGE BASIN FLOWING TO THE SITE IS ABOUT 14 ACRES  
INCLUDING THE 8.1 ACRE SITE AREA. OFF-SITE AREA  $\approx$  6 ACRES

NOTE: SLOPE ACROSS SITE (SOIL GROUP 60)  
 $(5045 - 4860) / 638 = 29\%$

SLOPE ABOVE SITE (SOIL GROUP 70)  
 $(5180 - 5045) / 862 = 16\%$

AVG SLOPE OF ENTIRE BASIN FLOWING TO  
VOLT AIR ST:  
 $(5180 - 4860) / 1500 \approx 21\%$

DESIGN STORM: 24-HOUR EVENT.

ON-SITE: 5 YR RTN

OFF-SITE: 25 YR (LOCAL STREETS)

ASSUME R.O. CALCS BY RATIONAL FORMULA FOR  
PRELIMINARY ANALYSIS.

$$Q = C i A$$

$$i_{5} = 0.09 \text{ in/hr (5 yr / 24 hr)}$$

$$i_{25} = 0.14 \text{ in/hr (25 yr / 24 hr)}$$

$$i_{100} = 0.175 \text{ in/hr (100 yr / 24 hr)}$$

SOIL GROUP #60 IS DEFINED AS HYDROLOGIC GROUP B  
#70 IS DEFINED AS HYDRO GROUP A.

ASSUME  $C = 0.35$  (SOIL #60)  
 $C = 0.30$  (SOIL #70)

(REFERENCE: CHOW "Handbk of Applied Hydrology"  
Table 21-21)

CITY VIEW GREEN HOMES  
 VOLTAIRE ST  
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HYDROLOGY (CONTINUED)

**21-38 HYDROLOGY OF AGRICULTURAL LANDS**

rate in in./hr for the given frequency, and  $a$  is the drainage area of the watershed in acres.

The rainfall data of the required frequencies can be obtained from published maps or charts [5, 6, 29]. Table 21-21 gives approximate values of  $C$  for selected soil and cover conditions. Watershed slope is not directly considered in the selection of  $C$ , but the effects of slope are included, since rainfall duration is taken as equal to the time of concentration.

**Table 21-21. Values of  $C$  for Use in Rational Formula\***

Soil type	Watershed cover		
	Cultivated	Pasture	Woodlands
With above-average infiltration rates; usually sandy or gravelly.....	0.20	0.15	0.10
With average infiltration rates; no clay pans; loams and similar soils.....	0.40	0.35	0.30
With below-average infiltration rates; heavy clay soils or soils with a clay pan near the surface; shallow soils above impervious rock.....	0.50	0.45	0.40

\* Table modified from Bernard [30].

43,389 30 SHEETS 3 SQUARE  
 43,389 200 SHEETS 3 SQUARE  
 MADE IN U.S.A.



CITY VIEW GREEN HOMES  
VOLTAIRE ST  
CARSON CITY NV

4/22/09  
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## DETENTION CALCULATIONS

- Site Development will include residential structure construction, driveways, patios and landscape areas
- Site Development will include 8 residential developments on the 8 acre site.
- Each residential development will have approximately 3000 SF of structure footprint plus about 1000 SF of driveway area for a total of about 4000 SF of impervious coverage per lot, excluding the long driveway to lots 7, 8, and 9

Assume  $C = 0.95$  for this area

- Each residential lot will include front yard landscaping in mostly planting of native, or like native, shrubs and plants. Est. area  $\cong 2000$  SF

Assume  $C = 0.30$  for the landscape area

- Average Lot Size  $\cong 1$  acre.
- Average  $C$  (excluding long driveway to lots 7, 8, & 9)

$$\frac{4000(0.95) + 2000(0.30) + 37,560(0.35)}{43560}$$

$$= 0.40_D \text{ (DEVELOPED)}$$

$$\text{AND } = 0.35_u \text{ (UN-DEVELOPED)}$$

- Each Lot includes about 37,560 SF of area to remain in its natural un-developed condition

Each residential unit will include detention basin area, either individually or in combination with another lot to mitigate site run-off for the 5-yr 24-hr event



CITY VIEW GREEN HOMES  
 VOLTAIRE ST  
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DETENTION (CONTINUED)

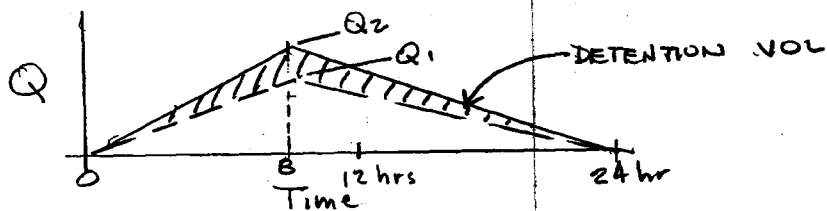
LOT DETENTION:  $V = Q_2 - Q_1 (\Delta T)$

$Q_1 = C_i A$  (Un-developed)

$= 0.35 (0.09) (1) = 0.032 \text{ cfs}$

$Q_2 = 0.40 (0.09) (1) = 0.036 \text{ cfs}$

Assume triangular distribution for 24 hour event w/ peak at 8 hours.



Def Vol =  $(0.036 - 0.032) (24 \times 60 \times 60 / 2)$

$V = 173 \text{ CF}$  w/  $Q_{MAX} = 0.032 \text{ cfs}$ .

ALTERNATIVELY,  $t_c = T_t + T_{nit}$  Abstraction.

Assume  $T_0 = 10 \text{ min}$

$T_t = \frac{L^{1.15}}{7700 H^{0.38}}$  (Cowan, EQ 21-5)

$= \frac{300^{1.15}}{(7700)(70^{0.38})}$

$= 2 \text{ min}$

$\therefore T_c = 12 \text{ min}$  AND  $i_{5yr-12m} = 1.9 \text{ in/hr}$

$V = [(0.4 - 0.35)(1.9)(1)] (12 \times 60 / 2)$

$= 34 \text{ CF}$  w/  $Q_p = 1.9 \text{ cfs}$

CITY VIEW GREEN HOMES  
VOLTAIRE ST  
CARSON CITY, NV

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Cme  
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## DETENTION (CONTINUED)

INDIVIDUAL LOTS:

USE 175 CF DETENTION  
w/ 0.032 cfs  
CONTROLLED OUTFLOW  
PER LOT

$$Q_{100} = (0.40)(0.175)(1) = 0.07 \text{ cfs}$$

## DRIVEWAY RUN-OFF

The long private D/w to Lots 6, 7, & 8 is not included in prior calculations.

Provide separate detention for run-off from this driveway as follows:

The driveway is about 460 long up to the areas included in the individual lot calculations prepared above.

The northerly 300' flows to one detention basin w/ a SD outlet. The remainder 160' up to Appion Way will be collected in a second basin w/ an outlet to the Appion Way roadside ditch.

Driveway will be have a constant 2% cross-slope down to the west. Run-off will be collected in a roadside ditch and directed to 2 detention basins.

Driveway width varies but will be assumed to be 24' for this preliminary analysis.

$$\therefore A_1 = (300 \times 24) / 43560 = 0.17 \text{ acres}$$

$$A_2 = 160 \times 24 / 43560 = 0.09 \text{ acres}$$

CITY VIEW GREEN HOMES  
VOLTAIRE ST  
CARSON CITY NV

1/22/09  
Dme  
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DETENTION (CONTINUED)

The long driveway to Lots 6, 7, & 8 will be sloped to roadside ditches. Run-off in those ditches will accumulate from the driveway surface as well as overland flow from the drainage basin west of the site.

D/w will be improved w/  $C=0.95$ .

Drainage Basin contributing flow to the driveway will be:

Total = 5.5 acres.

3.7 acres to northerly D/w section  
1.8 acres to southern D/w section

The balance of the off-site drainage basin flows uncontrolled across the northern end of Lot 8 (2.15 acres) and across the very southwestern corner of the site into Appion Way (1.55 acres)

C: About 1 acre of this drainage basin area is underlain with soil group #60 w/  $C=0.35$  and the remaining 4.5 acres is underlain by soil group #70 w/  $C=0.30$ .

$$C_{AVG} = \frac{(1)(.35) + 4.5(.30)}{5.5} = 0.31$$

CITY VIEW GREEN HOMES  
VOLTAIRE ST  
CARSON CITY, NV

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DETENTION (continued)

DRIVEWAY -

NORTH SECTION:  $Q_1 = C_i A$

where A includes the  
drainage basin area  
plus driveway area

$$A = 3.7 + 0.17 \\ = 3.87$$

$$Q_1 = (0.31)(0.09)(3.87) = 0.108 \text{ cfs}$$

$$Q_2 = (0.31)(0.09)(3.7) + (0.95)(0.09)(0.17) \\ = 0.118$$

$$V = (Q_2 - Q_1) \Delta T \\ = (0.118 - 0.108)(24 \times 60 \times 60 / 2) \\ = 432 \text{ CF}$$

USE	432 CF DETENTION w/ 0.108 cfs CONTROLLED OUTFLOW
DRIVEWAY BASIN "N"	

SOUTH SECTION:

$$Q_1 = (0.31)(0.09)(1.89) = 0.053 \text{ cfs}$$

$$Q_2 = (0.31)(0.09)(1.8) + (0.95)(0.09)(0.09) \\ = 0.058 \text{ cfs}$$

$$V = (0.058 - 0.053)(24 \times 60 \times 60 / 2) \\ = 224$$

USE	224 CF DETENTION w/ 0.53 cfs CONTROLLED OUTFLOW
D/W BASIN "S"	

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CONVEYANCE

1. SD @ D/W # N.

$$Q_{24-5} = 0.108 \text{ cfs.}$$

However, assume  $Q_{100} = (0.31)(0.175)3.7 + (0.95)(0.175)0.17$

$$Q_{100} = 0.23 \text{ cfs} \leftarrow$$

Assume min. pipe slope = 2%  $\phi$  10"  $\phi$  HDPE

$$n = 0.013 \quad Q_{\text{MAX}} = \frac{1.486}{0.013} (0.55)(0.2)^{2/3} 0.02^{1/2} = 3.1 \text{ cfs}$$

$$\therefore d = .2 \phi \approx 2"$$

USE	10" $\phi$ SD HDPE w/ $S_{\text{min}} = 2\%$
-----	--

ALTHOUGH 6"  $\phi$  WOULD SUFFICE — USE 10" MIN FOR EASE OF MAINTENANCE.

$$Q_{6-\text{MAX}} = 0.8 \text{ cfs !!}$$

2. D/W "N" OUTLET DITCH:

$$Q_{\text{MAX}} = 0.23 \text{ cfs.} \quad (Q_{100} \text{ from above})$$

Assume  $S = 2\%$   $n = 0.040$  (Rip-rap Channel)

$$Q = \frac{1.486}{0.040} AR^{2/3} (0.020)^{1/2}$$

$Q_{\text{MAX}} = 6 \text{ cfs}$  for 12" V-DITCH.  
 OR  $1.5 \text{ cfs}$  for 6" V-DITCH

USE	6" V-DITCH (MIN) w/ 2:1 SIDE SLOPES $\phi S_{\text{MIN}} = 2\%$
-----	---

CITY VIEW GREEN HOMES  
 VOLTAIRE ST  
 CARSON CITY NV

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CONVEYANCE (continued)

2. D/w "N" Outlet Ditch:

$$V = \frac{Q}{A}$$

$$= \frac{1.5}{0.5} = 3 \text{ fps}$$

USE ROCK STABILIZATION  
 6" MIN  $\phi$   
 w/ FILTER FABRIC  
 IN OUTLET DITCH

3. D/w "S" - SD Outlet

BY INSPECTION - USE

10"  $\phi$  SD  
 HDPE  
 w/  $S_{min} = 2\%$

4. APPION WAY + ROADSIDE DITCH

SLOPE VARIES: 12% BELOW D/W TO 30% ABOVE D/W.

ASSUME 1° V-DITCH w/ 2:1 SIDE SLOPES.

$Q = Q$  from un-controlled flow to SW cov.  
 +  $Q$  from D/w

SEE SHEET 8 - 4<sup>th</sup> TP

$$= (0.31)(0.175)(1.55) + [(0.31)(0.175)(1.8) + 0.95(1.75)(0.09)]$$

$= 0.08 + 0.11 \uparrow 2,100$

SEE SHT 9

$Q_{100} = 0.20 \text{ cfs}$

THIS IS MUCH LESS THAN CAPACITY OF 1° V-DITCH

USE 1° V-DITCH  
 w/ 6"  $\phi$  MIN ROCK  
 & FILTER FABRIC

5 SQUARE  
 5 SHEETS  
 5 SQUARE  
 200 SHEETS  
 5 SQUARE

42-382  
 42-389



NATIONAL  
 MADE IN U.S.A.



**BSA Consulting**

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Email: bsadev@sbcglobal.net

January 14, 2009

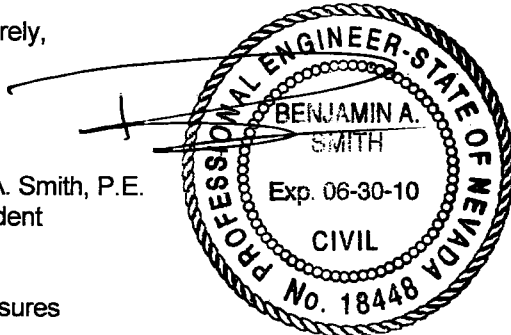
Carson City Development Services  
Att: Jeff Sharp  
2621 Northgate Lane  
Carson City, Nevada 89706

Dear Jeff:

This letter serves to verify that the fire supply water proposed for the subject project at 4500 and 4600 Voltaire Street complies with applicable standards and code requirements.

Fire flow test were conducted by Carson City on the fire hydrant located approximately 900' north of the project. The test was performed on March 1, 2000 and provided as applicable to our site by the Carson City Public Works Department. The test indicates an available fire flow of 2,055 gpm at a 20 psi residual pressure (see attached test data, including an additional pressure test performed at the hydrant in front of the project). The proposed single family homes for this project have been planned for a minimum 1000 gpm fire flow as specified by the Carson City Fire Department. The available fire flow exceeds the required fire flow and meets the Carson City Fire Marshall's requirements.

Sincerely,



Ben A. Smith, P.E.  
President

Enclosures

1-14-09



# CARSON CITY, NEVADA

CONSOLIDATED MUNICIPALITY AND STATE CAPITAL

## WATER UTILITY DIVISION

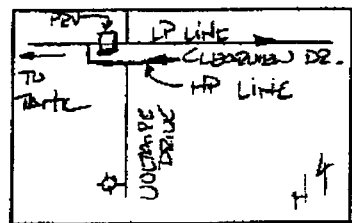
### FIRE FLOW DATA SHEET

TESTING PERSONNEL: R. JONES  
 DATE OF TEST: 3/1/00 TIME OF TEST: 7:30  
 REQUESTED BY: BILL LAUDRY @ BAYMON RESOURCES  
679 PINE VIEW DR. INCLINE VILLAGE 89451  
 TEST LOCATIONS: (Street & Cross Street or Address)

CLEGGVIEW & VOCTAIRE DR.

COMMENTS: FLOW AT HYDRANT AT END OF LINE

MAINLINE SIZE: 6"  
 PRESSURE: Static (S) 135 PSI  
 Residual (R) 102 PSI  
 Pitot (P) 65 PSI



LOCATION MAP

EXIT COEFFICIENT (C) .7 EXIT DIAMETER (INCHES) (D) 2.5  
 $Q = \text{FLOW QUANTITY FROM HYDRANT}$   
 $Q = (29.83) \times (C) \times (D^2) \times (\sqrt{P})$   
 $Q = (29.83) \times (.7) \times (6.25) \times (8.06)$   
 $Q_1 = \underline{1052.7}$  Gallons Per Minute

AVAILABLE WATER CALCULATION

$$D_1 = (S) - (R) \qquad Q_A = Q_1 \sqrt{D_2 / D_1}$$

$$D_1 = \underline{135} - \underline{102} = \underline{33} \qquad Q_A = \underline{1052} \sqrt{115 / 133}$$

$$D_2 = (S) - 20 \text{ PSI} \qquad Q_A = \underline{1963.8}$$

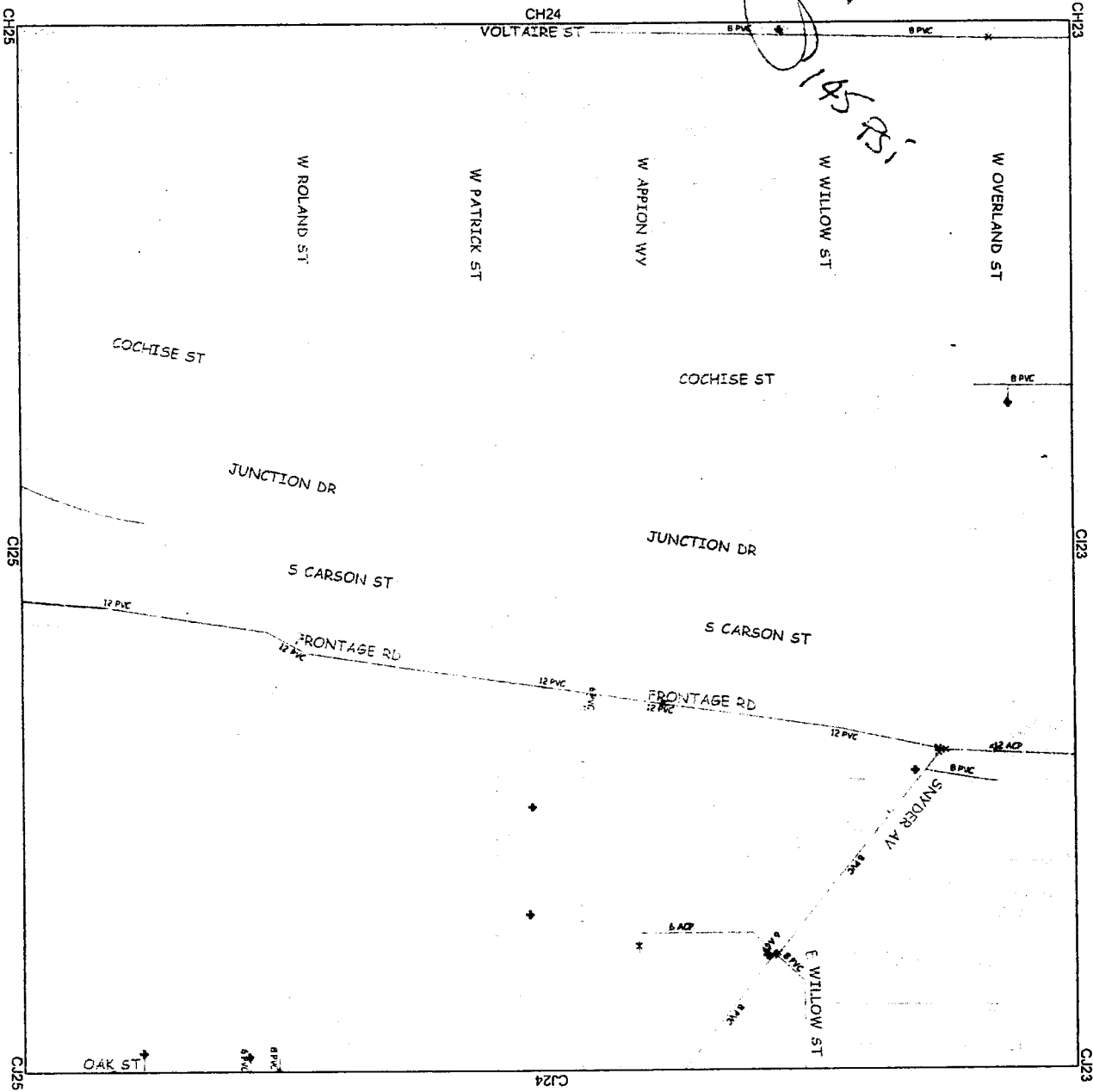
$$D_2 = \underline{135} - 20 \text{ PSI} = \underline{115}$$

IF  $Q_A \geq Q_1$ , THEN  $Q_{AT} = [(Q_A - Q_1) \cdot .1] + Q_1$   
 $Q_{AT} = [(1964 - 1052) \cdot .1] + 1052 = \underline{2055}$

$Q_{AT} = 2055$  G.P.M. = Total Available Water At 20 PSI Residual

UTILITIES DEPARTMENT  
 Environmental Control Authority • 3300 Butti Way, #7 • 89701 • (702) 887-2340  
 Wastewater Reclamation Plant • 3320 E. 5th Street • 89701 • (702) 887-2360  
 Utility Billing • 2621 Northgate Lane, #66 • 89706 • (702) 887-2370  
 Sewer Utility • 3300 Butti Way, #7 • 89701 • (702) 887-2340  
 Water Utility • 3300 Butti Way, #9 • 89701 • (702) 887-2355





WATER

SKETCH:

1 inch equals 200 feet



*Red*  
 Could you obtain  
 a static pressure  
 reading for the  
 hydrant?  
 Thanks!  
 Patrick

NOTES:

*145 PSI*

- LEGEND**
- ◆ FIRE HYDRANT
  - ◆ FIRE SERVICE
  - ▲ PRESSURE REDUCING VALVES
  - ◆ FLUSH OUTS
  - INTAKE
  - ◀ REDUCERS
  - SINGLE CHECK VALVE
  - ▨ TREATMENT PLANT
  - ⊛ FIRE HYDRANT VALVE
  - ⊛ GATE VALVE
  - ⊛ BUTTERFLY VALVE
  - ∨ VALVETS
  - BOOSTERS
  - ⊠ BACK FLOW DEVICE
  - ⊠ AIR RELEASE VALVE
  - WELLS
  - TANKS
  - WATER LINES
    - PUBLIC
    - PRIVATE
    - STATE
    - V&T RAILROAD (PROPOSED)
    - PROPOSED FREEWAY
  - CITY BOUNDARY

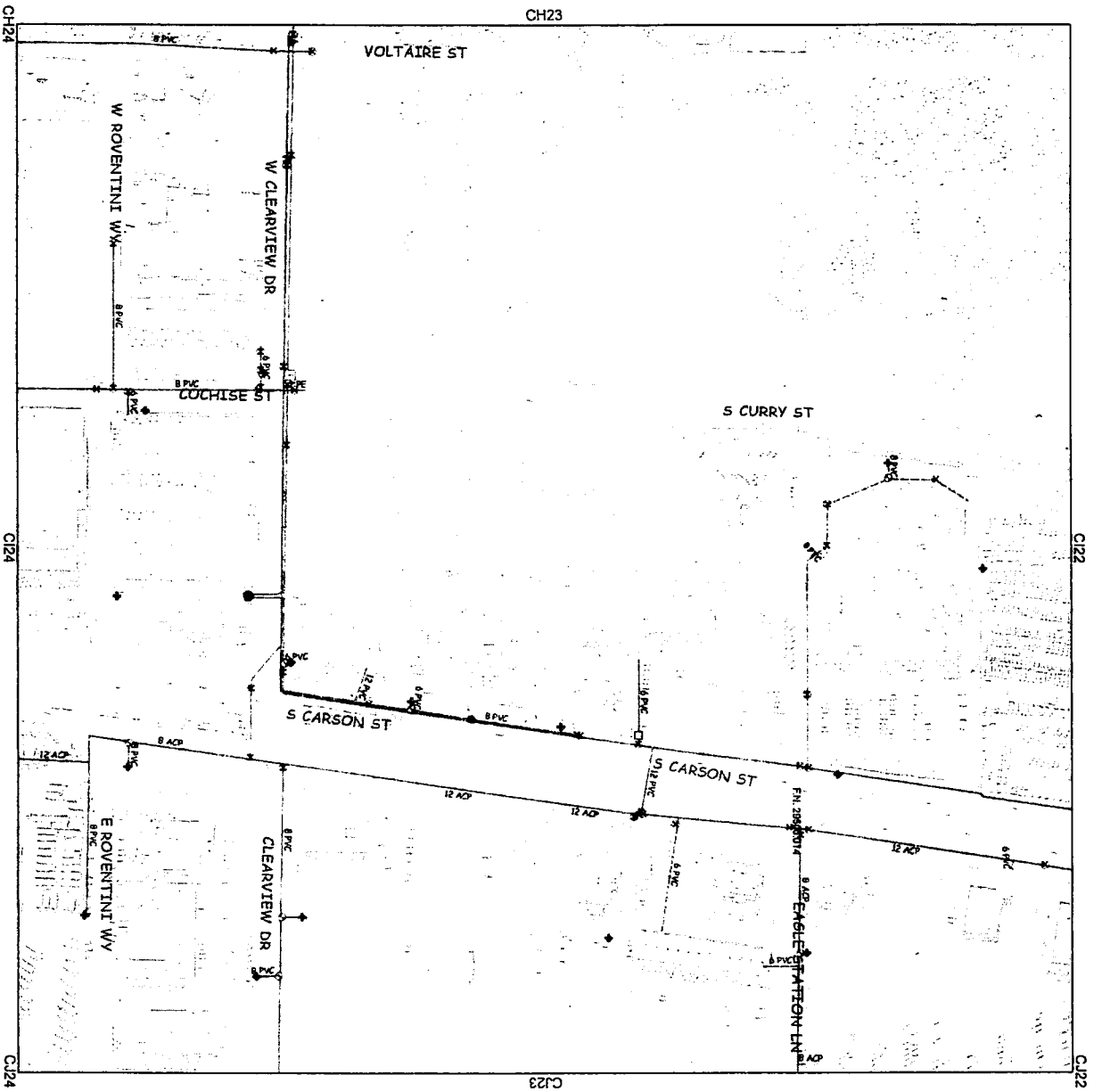
Photos From: 2006

CH23	C123	C123
CH24	C124	C124
CH25	C125	C125

MAP PAGE: C124

CONSULT THE MAIN  
 ENGINEERING MANUAL FOR THE CITY OF CARSON CITY  
 FOR ALTERNATE NUMBERS OR TO  
 TO THE SURFACE OR AROUND OF THE DATA  
 DETAIL NUMBER)

Jan 15, 2008



**WATER**

SKETCH:

1 inch equals 200 feet



NOTES:

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**LEGEND**

- ◆ FIRE HYDRANT
- ▲ FIRE SERVICE
- ▲ PRESSURE REDUCING VALES
- FLUSH OUTS
- INTAKE
- ▶ REDUCERS
- SINGLE CHECK VALVE
- TREATMENT PLANT
- ⊕ FIRE HYDRANT VALVE
- ⊗ GATE VALVE
- ⊕ BUTTERFLY VALVE
- ⊕ VALVES
- ⊕ BOOSTERS
- ⊕ BACK FLOW DEVICE
- ⊕ AIR RELEASE VALVE
- WELLS
- TANKS
- WATER LINES
  - PUBLIC
  - PRIVATE
  - STATE
- V&T RAILROAD (PROPOSED)
- PROPOSED FREEWAY
- CITY BOUNDARY

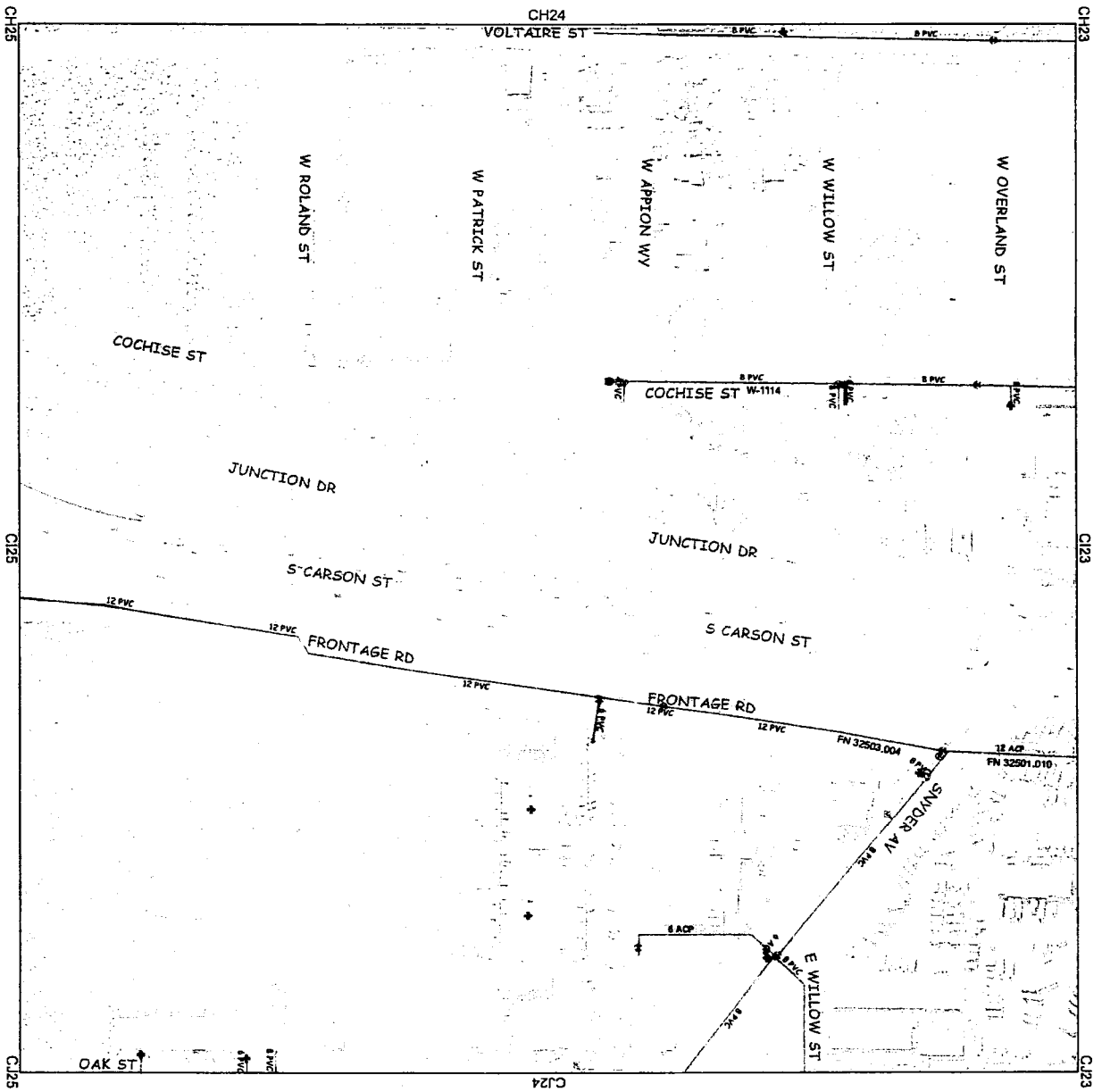
Photos From: 2006

Jan 15, 2008

		C122	C122
CH23	C123		C123
CH24	CH24		C124

MAP PAGE: C123

CASD/CITY/ARMAA  
 THIS MAP IS PREPARED FOR THE CITY OF CARSON CITY  
 REPRESENTATIVE AND LIABILITY AS SHOWN  
 ON THESE DRAWINGS.  
 DATE: JAN 15, 2008



**WATER**

SKETCH:

1 inch equals 200 feet



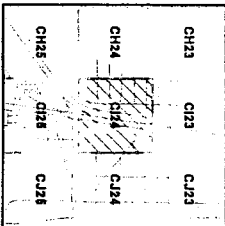
NOTES:

**LEGEND**

- ◆ FIRE HYDRANT
- ▲ FIRE SERVICE
- ▼ PRESSURE REDUCING VALVES
- FLUSH OUTS
- INTAKE
- ▲ REDUCERS
- SINGLE CHECK VALVE
- TREATMENT PLANT
- ◆ FIRE HYDRANT VALVE
- ⊕ GATE VALVE
- BUTTERFLY VALVE
- ⊙ VAULTS
- ⊙ BOOSTERS
- ⊗ BACK FLOW DEVICE
- ⊕ AIR RELEASE VALVE
- WELLS
- TANKS
- WATER LINES
  - PUBLIC
  - PRIVATE
  - STATE
  - V&T RAILROAD (PROPOSED)
  - PROPOSED FREEWAY
- CITY BOUNDARY

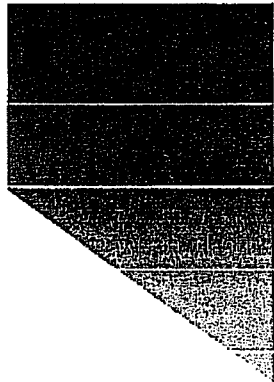
Photos From: 2006

MAP PAGE: C124



Apr 11, 2008

CONDUCTIVITY: 8000  
 THIS MAP IS PREPARED FOR THE CITY OF CARSON CITY  
 FOR THE UTILITY ENGINEER. THE ENGINEER IS NOT  
 RESPONSIBLE FOR THE ACCURACY OF THE DATA  
 PROVIDED TO THE ENGINEER OR FOR THE DATA  
 OBTAINED FROM THE DATA.



# Western Title

company, inc.

Since 1902

## Preliminary Report



**NATIONWIDE SERVICE AVAILABLE THROUGH OFFICES LOCATED AT:**

241 Ridge Street • Reno, Nevada 89501 • (775) 332-7100 • FAX (775) 332-7121  
665 Sierra Rose Drive • Reno, Nevada 89511 • (775) 829-4960 • FAX (775) 829-4976  
294 E. Moana Lane • Suite B28 • Reno, Nevada 89502 • (775) 332-7180 • FAX (775) 332-7185  
4884 Sparks Blvd., Suite 100 • Sparks, Nevada 89436 • (775) 626-8590 • FAX (775) 626-8598  
2310 S. Carson Street, Suite 5B • Carson City, Nevada 89701 • (775) 687-8500 • FAX (775) 687-8511  
401 South Bridge St. • Winnemucca, Nevada 89445 • (775) 623-4477 • FAX (775) 623-4193  
• Lovelock & Battle Mountain, Nevada • (800) 840-0432  
55 N. Center St. • Suite 3 • Fernley, Nevada 89408 • (775) 575-6111 • FAX (775) 575-6124  
720 S. Main Street • Suite D • Yerington, Nevada 89447 • (775) 463-1889 • FAX (775) 463-1389

**PRELIMINARY REPORT**

Assessor's Parcel No.: 009-253-10  
009-255-01

Order No.: 021731-KKT

Property Address: 4500 and 4600 Voltaire St.  
Carson City NV

Escrow Officer: Kim Thompson  
Office Location: Western Title Company  
Carson Main Office  
2310 S. Carson St #5B  
Carson City NV

Buyers/Borrowers: Benjamin C. Seljestad and  
Maureen E. Seljestad

Reference No.:

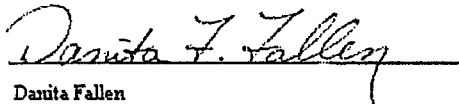
In response to the above referenced application for a Policy of Title Insurance, **Lawyers Title Insurance Corporation** hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein, hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms. The printed Exceptions and Exclusions from the coverage of said Policy or Policies are set forth on the attached cover. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth on the attached cover. Copies of the Policy forms should be read. They are available from the office which issued this report.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

**Dated as of 10/20/2008 at 7:30 am**

Western Title Company, Inc., an authorized agent

By

  
Danita Falley

The form of Policy of Title Insurance contemplated by this report is:

**ALTA 2006 Extended Lender's**

The estate or interest in the land hereinafter described or referred to covered by this Report is:

**Fee Simple**

Title to said estate or interest at the date hereof is vested in: **Benjamin C. Seljestad and Maureen E. Seljestad, husband and wife, as joint tenants**

Please read the exceptions shown or referred to below and the Exceptions and Exclusions set forth on the attached cover of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered. It is important to note that this Preliminary Report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

Order No. 021731-KKT

### EXCEPTIONS

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. State and County Taxes for the fiscal year **July 1, 2008 to June 30, 2009**, together with any other taxes or assessments collected therewith, a lien, now due and payable:  
ASSESSORS' PARCEL NUMBER: **009-253-10**  
QUARTERLY INSTALLMENTS  
1st \$149.64  
Status **PAID**  
2nd \$148.00  
Status **PAID**  
3rd \$148.00  
Status **OPEN (Due 01/05/09)**  
4th \$148.00  
Status **OPEN (Due 03/02/09)**  
Total **\$593.64**
2. State and County Taxes for the fiscal year **July 1, 2008 to June 30, 2009**, together with any other taxes or assessments collected therewith, a lien, now due and payable:  
ASSESSORS' PARCEL NUMBER: **009-255-01**  
QUARTERLY INSTALLMENTS  
1st \$120.94  
Status **PAID**  
2nd \$118.00  
Status **PAID**  
3rd \$118.00  
Status **OPEN (Due 01/05/09)**  
4th \$118.00  
Status **OPEN (Due 03/02/09)**  
Total **\$474.94**
3. Any additional liens which may be levied by reason of said premises being within the **Carson City Water and Sewer District**.
4. Water rights, claims or title to water, whether or not recorded.
5. Rights of way for any existing roads, trails, canals, streams, ditches, drain ditches, pipe, pole or transmission lines traversing said premises.
6. Provisions, Reservations, Easements and the effect thereof, contained in the Patent from the **United States of America**, recorded on **August 1, 1961, in Book 93 Deeds, Page 208** as Document No. **41466**, Land Patent Records of Carson City, Nevada. **(AFFECTS PARCEL 2)**
7. Provisions, Reservations, Easements and the effect thereof, contained in the Patent from the **United States of America**, recorded on **August 29, 1966, in Book 54, Page 587** as Document No. **10199**, Land Patent Records of

Carson City, Nevada. (AFFECTS PARCEL 1)

- 8 Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
- 9 Matters as disclosed on Record of Survey filed in the office of the County Recorder of Carson City, State of Nevada on **June 27, 2006, in Book 9, Page 2609** as Document No. **355625**. Survey Map No. **2609**.
- 10 A Deed of Trust to secure an indebtedness in the amount of **\$283,500.00** dated **October 18, 2006**, executed by **Benjamin C. Seljestad and Maureen E. Seljestad, husband and wife**, as Trustor, to **Lawyers Title Insurance Co.**, as Trustee, in favor of **IndyMac Bank, F.S.B., a Federally Chartered Savings Bank**, as Beneficiary, recorded on **October 30, 2006**, as Document No. **360386**, Official Records of Carson City, Nevada. (AFFECTS PARCEL 1)
- An Assignment of the beneficial interest under said Deed of Trust which names **Deutsche Bank National Trust Company as Trustee of IndyMac Residential Mortgage-Backed Trust, Series 2006-L4 Residential Mortgage-Backed Certificates, Series 2006-L4**, as Assignee, recorded on **October 29, 2007**, as Document No. **373334**, Official Records of Carson City, Nevada.
- 11 A Deed of Trust to secure an indebtedness in the amount of **\$550,000.00** dated **May 2, 2008**, executed by **Benjamin C. Seljestad and Maureen E. Seljestad, husband and wife, as joint tenants**, as Trustor, to **Western Title Company, Inc.**, as Trustee, in favor of **Jeanette M. Brandenburg, Surviving/Sole Trustee of The Brandenburg Family Trust, dated February 20, 1997**, as Beneficiary, recorded on **May 5, 2008**, as Document No. **379101**, Official Records of Carson City, Nevada. (AFFECTS PARCEL 2)
- 12 A property inspection will be made prior to recording the trust deed to be insured. If such inspection discloses any evidence of commencement of a work of improvement, the coverage for mechanic's lien insurance will be deleted from the policy, unless all the necessary documents for indemnification have been submitted to the Company and such indemnification has been formally approved by the Company, prior to recording the trust deed.
- 13 Any liens that may be filed for work of improvement in progress or recently completed on said land. (NO NOTICE OF COMPLETION HAS BEEN RECORDED)
- 14 Any notes following the legal description herein referencing NRS 111 312 are required for recording purposes only and will not be insured in any policy of title insurance.

THE FOLLOWING NOTES ARE FOR INFORMATION PURPOSES ONLY:

NOTE: A search of the Official Records for the county referenced in the above order number, for the **24** months immediately preceding the date above discloses the following instruments purporting to convey the title to said land: **Deeds recorded October 30, 2006 as Document No. 360384, 360385, 360387, and 360388, Official Records.**

NOTE:

If any current work of improvements have been made on the herein described real property (within the last 90 days) and this Report is issued in contemplation of a Policy of Title Insurance which affords mechanic lien priority coverage (i.e. ALTA POLICY); the following information must be supplied for review and approval prior to the closing and issuance of said Policy: (a) Copy of Indemnity Agreement; (b) Financial Statements; (c) Construction Loan Agreement; (d) If any current work of improvements have been made on the herein described real property Building Construction Contract between borrower and contractor; (e) Cost breakdown of construction; (f) Appraisal; (g) Copy of Voucher or Disbursement Control Statement (if project is complete).

NOTE: This report makes no representations as to water, water rights, minerals or mineral rights and no reliance can be made upon this report or a resulting title policy for such rights or ownership.

NOTE: Notwithstanding anything to the contrary in this Report, if the policy to be issued is other than an ALTA Owner's Policy (6/17/06) or ALTA Loan Policy (6/17/06), the policy may not contain an arbitration clause, or the terms of the arbitration clause may be different from those set forth in this Report. If the policy does contain an arbitration clause, and the Amount of Insurance is less than the amount, if any, set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.

NOTE: The map, if any, attached hereto is subject to the following disclaimer:

WESTERN TITLE COMPANY does not represent this plat as a survey of the land indicated hereon, although believed to be correct, no liability is assumed as to the accuracy thereof.

NOTE: Short Term Rate Applicable



Order No. 021731-KKT

**Legal Description**

All that real property situate in Carson City, State of Nevada, described as follows:

**PARCEL 1:**

All that certain real property situate within a portion of the Southeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 31, Township 15 North, Range 20 East, M.D.B. & M., Carson City, Nevada, more particularly described as follows:

Commencing at the North quarter corner of Section 31; thence South 45°07'33" East, 933.53 feet to the true point of beginning; thence South 89°58'42" East, 630.14 feet; thence South 00°04'26" East, 299.35 feet; thence North 89°58'19" West, 600.01 feet; thence North 00°05'55" West, 269.28 feet; thence North 89°58'42" West, 30.00 feet; thence North 00°05'55" West, 30.00 feet to the true point of beginning.

Basis of Bearings: The East-West center section line of Section 31, per Plat No. 953, Carson City Records (North 89°56'24" West)

NOTE: The above metes and bounds description appeared previously in that certain Grant, Bargain and Sale Deed recorded in the office of the County Recorder of Carson City County, Nevada on October 30, 2006, as Document No. 360384 of Official Records

**PARCEL 2:**

All that certain real property situate within a portion of the Southeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 31, Township 15 North, Range 20 East, M.D.B. & M., Carson City, Nevada, more particularly described as follows:

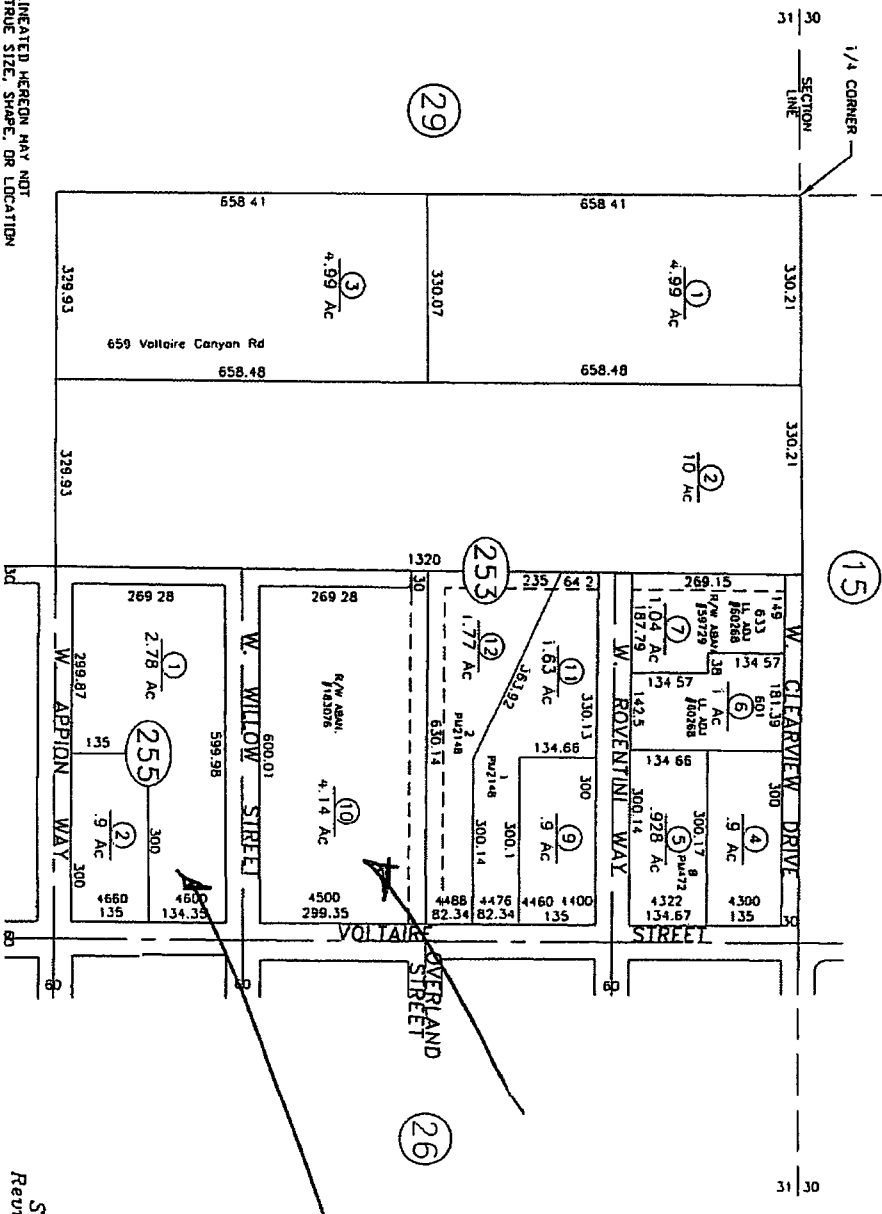
Commencing at the North quarter corner of Section 31; thence South 34°12'53" East, 1,230.99 feet to the true point of beginning; thence South 89°58'19" East, 599.98 feet; thence South 00°04'26" East, 134.35 feet; thence North 89°57'56" West, 300.00 feet; thence South 00°04'26" East, 135.00 feet; thence North 89°57'56" West, 299.87 feet; thence North 00°05'05" West, 269.28 feet to the true point of beginning.

NOTE: The above metes and bounds description appeared previously in that certain Grant, Bargain and Sale Deed recorded in the office of the County Recorder of Carson City County, Nevada on October 30, 2006, as Document No. 360388 of Official Records

Assessor's Parcel Number(s):  
009-253-10  
009-255-01

NW1/4 NE1/4 SECTION 31, T.15 N., R.20 E., M.D.B. & M.

9-25



NOTE  
SOME PARCELS DELINEATED HEREON MAY NOT  
BE PRESENTED IN TRUE SIZE, SHAPE, OR LOCATION  
DUE TO DISCREPANCIES BETWEEN LOT LINES.  
CARSON CITY, NEVADA  
THIS MAP IS PREPARED FOR THE USE OF THE CARSON CITY  
ASSESSOR FOR ASSESSMENT AND ILLUSTRATIVE PURPOSES  
ONLY. IT DOES NOT REPRESENT A SURVEY. NO LIABILITY  
IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE  
DATA DELINEATED HEREON. YOU CAN VIEW AND PRINT OUR  
MAPS AT NO CHARGE FROM OUR WEBSITE AT  
[WWW.CARSON-CITY.NV.US](http://WWW.CARSON-CITY.NV.US)

Scale: 1" = 200'  
Revised: 07/11/2006



Corrected distances



DEC. 17. 2008

2:26PM

WESTERN-TITLE

Parcel Detail for Parcel # 009-255-01

**Location**  
 Property Location 4600 VOLTAIRE ST  
 Town  
 Subdivision Lot Block  
 Property Name

**Description**  
 Total Acres 2.700 Ag Acres .000 W/R Acres .000  
**Improvements**  
 Single-fam Detached 0 Non-dwell Units 0 Bdrm/Bath 0/0.00  
 Single-fam Attached 0 MH Hookups 0 Stories .0  
 Multi-fam Units 0 Wells 0  
 Mobile Homes 0 Septic Tanks 0  
 Total Dwelling Units 0 Bldg Sq Ft 0  
 Garage Sq Ft 0 Attch/Detch  
 Basement Sq Ft 0 Finished 0

**Ownership**  
 Assessed Owner Name SELJESTAD, BENJAMIN C & MAUREEN  
 Mailing Address 1647 TRUCKEE DR  
 CARSON CITY, NV 89706-0000  
 Legal Owner Name SELJESTAD, BENJAMIN C & MAUREEN  
 Vesting Doc#, Date 360386 10/30/06 Book/Page /  
 Map Document #

**Appraisal Classifications**  
 Current Land Use Code 120  
 Zoning SF1A  
 Re-appraisal Group 5  
 Orig Constr Year  
 Re-appraisal Year 2007  
 Weighted Year

Valuation

http://www.ccapps.org/cgi-bin/asw102?Parcel=925501

12/16/2008

NO. 371 P. 2/16

DEC. 17. 2008

2:26PM

WESTERN-TITLE

NO. 371

P. 3/16

12/16/2008

	Working Year Closed/Reopened Prior Year		
	2010-11	Year 2008-10	2008-09
Land	66,500	66,500	70,000
Improvements	0	0	0
Personal Property	0	0	0
Ag Land	0	0	0
Exemptions	0	0	0
Net Assessed	66,500	66,500	70,000

20 DEC. 17. 2008

2:26PM

WESTERN-TITLE

NO. 371

P. 4/16

IN WITNESS WHEREOF, the Party of the First Part has caused its corporate name to be hereunto subscribed and its corporate seal affixed pursuant to proper resolutions of its Company the day and year hereinabove written.

ATTEST:  
STATE OF NEVADA  
COUNTY OF WASHOE

NEVADA TITLE GUARANTY COMPANY (SEAL)  
By Ernest J. Wilson President

On this 1st day of August, 1961, personally appeared before me, a Notary Public in and for said county and state, ERNEST J. WILSON, known to me to be the President of the Corporation that executed the foregoing instrument, and upon oath did depose that he is the officer of said Corporation as above designated; that he is acquainted with the seal of said Corporation and that the Seal affixed to said instrument is the seal of said Corporation; that the signature to said instrument was made by the officer of said Corporation as indicated after said signature; and that the said Corporation executed the said instrument freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at my office in said County the day and year in this certificate first above written.

Aug 1, 1961 (SEAL)  
NOTARY PUBLIC

DOCUMENT NO. 11462

Filed for record at the request of NEVADA TITLE GUARANTY CO. at 22 minutes past 10 o'clock A.M. Recorded in Book 93 of Deeds Page 207, Records of Washoe County, Nevada

Alvin L. ...  
County Recorder  
By \_\_\_\_\_ Deputy

FEES: \$  
Aug 1, 1961

LA 1222  
(Aug. 1957)  
Nevada 045291

ON 920

THE UNITED STATES OF AMERICA,  
To all whom these presents shall come, Greeting:

WHEREAS, a Certificate of the Land Office at Reno, Nevada, has been issued showing that full payment has been made by the claimant John E. Wylie pursuant to the provisions of the Act of Congress approved June 1, 1938 (52 Stat. 509), entitled "An Act to provide for the purchase of public lands for home and other sites," and the acts supplemental thereto, for the following-described land:

Mount Diablo Meridian, Nevada.

T. 15 N., R. 20 E.,

Sec. 32, 34 & 35

The area described contains 5.00 acres, according to the Official Plat of the Survey of the said land, on file in the Bureau of Land Management:

NOW KNOW YE, That the UNITED STATES OF AMERICA, in consideration of the premium, and in conformity with the several Acts of Congress in such case made and provided, HAS GIVEN AND GRANTED, and by these presents DOES GIVE AND GRANT unto the said claimant and to the heirs of the said claimant the Tract above described; TO HAVE AND TO HOLD the same, together with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereto belonging, unto the said claimant and to the heirs and assigns of the said claimant forever; subject to any vested and accrued water rights for mining, agricultural, manufacturing, or other purposes, and rights to ditches and reservoirs used in connection with such water rights, as may be recognized and acknowledged by the local customs, laws, and decisions of courts; and there is reserved from the lands hereby granted, a right-of-way thereon for ditches or canals constructed by the authority of the United States. Except-

DEC. 17. 2008

2:26PM

WESTERN-TITLE

NO. 371309 P. 5/16

ing and reserving, also, to the United States all oil, gas and other mineral deposits, in the land so patented, together with the right to prospect for, mine, and remove the same according to the provisions of said Act of June 1, 1938. This patent is subject to a right-of-way not exceeding 33 feet in width, for roadway and public utility purposes, to be located along the boundaries of said land.

IN TESTIMONY WHEREOF, the undersigned authorized officer of the Bureau of Land Management, in accordance with the provisions of the Act of June 17, 1948 (62 Stat., 476), has, on the name of the United States, caused these letters to be made Patent, and the Seal of the Bureau to be hereunto affixed.

GIVEN under my hand, in the District of Columbia, the ELEVENTH day of JULY in the year of our Lord one thousand nine hundred and SIXTY-ONE and of the Independence of the United States the one hundred and EIGHTY-SIXTH.

(SEAL)

For the Director, Bureau of Land Management.

By Edith V. Talley

Chief, Patent Section.

Patent Number 1221111

OPD 86637

Filed for Record at Request of PIONEER TITLE INSURANCE COMPANY OF NEVADA AUG 1, 1961 at 47 Min. Past 4 o'clock P M Recorded in Book 93 Deeds Page 208 Records Ormsby County, Nevada.

Adeline M. Johnson  
County Recorder

File No. 13466

By \_\_\_\_\_ Deputy

THIS INSTRUMENT made the 31st day of July, 1961, between JOHN E. WYLIE and JUNE E. WYLIE, husband and wife, parties of the first part, and BJARNE PEDERSON, party of the second part,

W I T N E S S E S:

That the said parties of the first part for and in consideration of the sum of Ten Dollars (\$10.00), lawful money of the United States of America, to them in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, do by these presents grant, bargain, sell, convey and confirm to and unto the said party of the second part, and to his heirs and assigns forever, all that certain lot, piece or parcel of land locate, situate and being in the County of Ormsby, State of Nevada, more particularly described as follows, to-wit:

33 of the SE1/4 of the SW1/4 of the NE1/4 Section 31, T. 15 N., R. 20 E., N.D.B.M., Ormsby County, Nevada.

Subject to a right of way not exceeding 33 feet in width for roadway and public utility purposes, to be located along the boundaries of said land.

TOGETHER with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

TO HAVE AND TO HOLD all and singular the said premises together with the appurtenances unto the said party of the second part, and to his heirs and assigns forever.

IN WITNESS WHEREOF the said parties of the first part have hereunto set their hands the day and year first above written.

June E. Wylie

John E. Wylie  
Parties of the First Part

STATE OF NEVADA,  
COUNTY OF WASHOE

Missile

DEC. 17. 2008. 2:27PM

WESTERN-TITLE

NO. 371

P. 6/15

WESTERN

WESTERN -0-

### Grant, Bargain, Sale Deed

THIS INSTRUMENT WITNESSETH: That BJARNE PEDERSON

in execution of a 1.8.08 the receipt of which is hereby acknowledged, do hereby Grant, Bargain, Sell and Convey to BJARNE PEDERSON and CLAYNE PEDERSON as community property

All above property is in the City of Carson City County of \_\_\_\_\_ State of Nevada, located and described as follows:

PARCEL NO. 1

The North half of the Southeast Quarter of the Northwest Quarter of the Northwest Quarter of Section 31, T15 N., R. 20 E., N.D.B. 61.

PARCEL NO. 2

The East half of the Southeast Quarter of the Northwest Quarter of the Northwest Quarter of Section 31, T15 N., R. 20 E., N.D.B. 61.

PARCEL NO. 3

The East half of the Northwest Quarter of the Northwest Quarter of the Northwest Quarter of Section 31, T15 N., Range 20 East, N.D.B. 61.

PARCEL NO. 4

The South half of the Southwest Quarter of the Northwest Quarter of the Northwest Quarter of Section 31, T15 N., Range 20 East, N.D.B. 61.

EXCEPTING THEREFROM the South 165 feet of the East 300 feet.

Documentary Transfer Tax \$ -0-

Under penalty of Perjury:

Computed on full value of property conveyed; or  
 Computed on full value less liens and encumbrances remaining thereon at time of transfer.

[Signature]  
Signature of Declarant or Agent

Together with all and singular the incidents, benefits and appurtenances thereto in anywise by law appertaining.

Witness my hand on this 8 day of Feb 1979

CITY OF NEVADA }  
CITY OF Carson City }

[Signature]  
BJARNE PEDERSON

at Feb 8, 1979

[Signature]  
Clayne L. Pederson

[Signature]

do hereby certify that the above instrument is a true and correct copy of the original as the same appears from the records of this office.

[Signature]  
County Clerk

Official Seal



INDEX NO. \_\_\_\_\_ RECORDERS  
OWNER NO. \_\_\_\_\_ INSTRUMENT NO. \_\_\_\_\_  
WHICH SHOULD BE MADE TO: Sharon E. Griffin  
P.O. Box 608 Carson City, Nev. 89701

MAIL TAX STATEMENTS TO:  
Bjarne Pederson  
706 Fleischman Way  
Carson City, Nevada 89701

FILED FOR RECORD  
AT THE REQUEST OF  
GARY JERRIN

1979 JAN -8 PM 2:49  
FILE NO. 68162  
PETE SUPERA  
CARSON CITY RECORDER  
BY [Signature]

DEC. 17. 2008

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WESTERN-TITLE

NO. 371

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Case No. 85-01762-P

Dept. No. \_\_\_\_\_

**FILED**

17 DEC -9 2008

**TED P. THORNTON**  
**CLERK**  
**R. THOMAS**

IN THE FIRST JUDICIAL DISTRICT COURT OF THE STATE OF NEVADA

IN AND FOR CARSON CITY

IN THE MATTER OF THE ESTATE

OF

BJARNE A. PEDERSON

deceased.

ORDER FOR APPROVAL OF  
FIRST ACCOUNT, REPORT  
OF ADMINISTRATION, AND  
DECREE OF PARTIAL  
DISTRIBUTION

The Petition of DAVID MORGAN, EXECUTOR OF THE ESTATE OF BJARNE PEDERSON, deceased, praying for the distribution of the Estate of Bjarne Pederson, deceased, coming on regularly at this time for hearing; and

It appearing that due notice of such hearing has been given as required by law; and

That due notice to creditors has been given as required by law;

That the first account and report of said Executor has been duly made, and is hereby confirmed by order of this Court;

That on the 10th day of October, 1985, the said Bjarne Pederson died testate in Carson City, Nevada, being at that time a resident of Carson City, Nevada; and leaving his Last Will and Testament; and that said Last Will and Testament was duly

Stamps, Seals  
& Marks  
Remove for use  
Carson City NV  
District Court

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DEC. 17. 2008

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WESTERN-TITLE

NO. 371

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1 admitted to probate on the 12th day of November, 1985, and  
 2 thereafter said Petitioner was appointed as Executor of said  
 3 estate and Letters Testamentary were duly issued to said  
 4 Petitioner on the 12th day of November, 1985; that Petitioner  
 5 has rendered an accounting and report of administration; that a  
 6 major portion of the estate consists of stock in Pederson  
 7 Realty, a Nevada corporation. In the opinion of the Executor,  
 8 it is more advantageous to the estate not to distribute this  
 9 stock at this time, due to 1986 changes in the Internal Revenue  
 10 Code. Consequently, all other assets of the estate should be  
 11 partially distributed according to the Last Will and Testament  
 12 of Bjarne Pederson.

13 It is therefore, ORDERED, ADJUDGED, and DECREED that  
 14 due notice to creditors has been given as required by law, and  
 15 that the accounting and report of administration filed herein is  
 16 hereby confirmed.

17 It is further ORDERED, ADJUDGED, and DECREED that the  
 18 partial Executor's fee for DAVID MORGAN is hereby set at \$21,402.<sup>00</sup>

19 It is further ORDERED, ADJUDGED, and DECREED that the  
 20 attorney's fee for GARY A. SHERIN, ESQ., attorney for the  
 21 Executor of the Estate of Bjarne Pederson, is hereby set at  
 22 \$10,450.80, and he should further be reimbursed the sum of  
 23 \$630.80, for sums advanced to the estate.

24 It is further ORDERED, ADJUDGED, and DECREED that the  
 25 Estate of Bjarne Pederson, after paying the above mentioned fees  
 26 as ordered by this Court, be partially distributed as follows:

Sherrin, Sherin  
 & Kade  
 Attorneys at Law  
 Carson City, NV

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WESTERN-TITLE

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1                    1. TO DAVID MORGAN, Trustee of that Testamentary  
 2 Trust created by the Last Will and Testament of Bjorne Pedersen,  
 3 dated February 27, 1978, the following:

4                    a. A 100% interest in Carson City, Nevada,  
 5 Parcel No. 2-135-05, more particularly  
 6 described as follows:

7                    Lot 2 and Lot 3 in Block 1 of Rice-Peters  
 8 Addition to Carson City, shown by the  
 9 Official Plat on file in the Office of the  
 10 County Recorder of Ormsby County, Nevada,  
 11 together with all buildings and improvements  
 12 situate thereon.

13                    b. A 50% interest in Carson City, Nevada,  
 14 Parcel Nos. 7-061-55, 7-061-56, 7-061-57, 7-  
 15 061-58, 7-081-26, 7-081-27, 7-081-28, and 7-  
 16 081-29, more particularly described as  
 17 follows:

18                    PARCEL NO. 1:

19                    A portion of the SW 1/4 of SW 1/4 of Section  
 20 13, Township 15 North, Range 19 East, N.D.S.  
 21 & M., more particularly described as  
 22 follows:

23                    BEGINNING at the Southwest corner of said  
 24 Section 13; thence North 89°41'23" East  
 25 along the South line of said Section 13 a  
 26 distance of 663.59 feet; thence North  
 27 0°03'58" West 535.00 feet to a point lying  
 28 westerly of the Rabe Spring; thence North  
 29 39°19'22" East 1016.72 feet to the Northeast  
 30 corner of the Southwest Quarter of the  
 31 Southwest Quarter of said Section 13; thence  
 32 South 89°38'58" West along the North line of  
 33 the Southwest Quarter of the Southwest  
 34 Quarter of said Section 13, a distance of  
 35 1308.79 feet; thence South 0°03'58" East  
 36 along the section line common to Sections 13  
 37 and 14 in said Township and Range, a

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distance of 1317.10 feet to the true point of beginning.

EXCEPTING THEREFROM that portion conveyed to Robert J. Romaggi by deed recorded June 17, 1958, in Book 78 of Deeds, page 52, Ormsby County, Nevada, records.

Reference is hereby made to that certain Parcel Map 981, filed in the Office of the Recorder of Carson City, Nevada.

PARCEL NO. 2:

All of the Northwest Quarter of the Southwest Quarter of Section 13, Township 15 North, Range 19 East, N.D.B. & M.

EXCEPTING THEREFROM six acres in the Northwest corner of said Southwest Quarter as excepted by Deed recorded May 13, 1913, in Book 36 of Deeds, page 343, Ormsby County, Nevada, records.

ALSO EXCEPT from Parcel 1 and 2 above, that portion lying within the boundaries of Kings Canyon Park Subdivision, Unit #1, filed September 30, 1971, as File No. 95545.

c. A 50% interest in Carson City, Nevada, Parcel No. 8-271-07, more particularly described as follows:

All that certain lot, piece or parcel of land situate in Carson City, State of Nevada, more particularly described as follows:

Real property situate in the Southeast one-quarter of the Northwest one-quarter of Section 10, Township 15 North, Range 20 East, N.D.B. & M., Carson City, Nevada, more particularly described as follows, to-wit:

COMMENCING at a point on the Northern right-of-way line of Nevada State Highway U.S. Route 50, from which the section corner common to Sections 9, 10, 15, and 16 of said Township and Range bears South 34°51'39"

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Sherrin, West  
& Kist  
Attorneys at Law  
Carson City, NV  
Suburban Plaza

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West 3,409.93 feet and running thence South 61°48'57" West 17.02 feet along the said Northern right-of-way line to the most Southernly corner of that parcel of land as described in the deed to Jack Strode, Jr., as recorded December 31, 1959, in Book 85 of Deeds, Page 169, Document No. 29753, Ormsby County Records, said Southernly point also being the TRUE POINT OF BEGINNING, thence along the Western line of said parcel to an angle point in said western line North 0°05'07" East 356.22 feet; thence continuing along said western line North 89°57'43" West 142.01 feet to the eastern line of that parcel of land as described in the deed to Walter A. Suk and Kate Suk, as recorded April 12, 1955, in Book 67 of Deeds, page 116, Document No. 2007, Ormsby County Records; thence continuing along eastern line of said Suk property South 0°05'07" West 434.61 feet to the Northern right-of-way line of said U.S. Route 50; thence along said Northern right-of-way line North 61°48'57" East 167.21 feet to the Point of Beginning.

d. A 50% interest in that Carson City, Nevada, Parcel No. 9-254-1, more particularly described as follows:

The North half of the Southeast Quarter of the Northwest Quarter of the Northeast Quarter of Section 31, T. 15 N., R. 20 E., M.D.B. & M.

e. A 50% interest in that Carson City, Nevada, Parcel No. 9-253-2, more particularly described as follows:

The East half of the Southwest Quarter of the Northwest Quarter of the Northeast Quarter of Section 31, T. 15 N., R. 20 E., M.D.B. & M.

and

The East half of the Northwest Quarter of the Northwest Quarter of the Northeast

Strode, Deed & Note  
January 30, 1960  
Carson City  
Haddan, Inc.

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Quarter, Section 31, T. 15 N., R. 20 E.,  
M.D.B. & M.

f. A 50% interest in that Carson City,  
Nevada, Parcel No. 9-255-1, more  
particularly described as follows:

The South half of the Southeast Quarter of  
the Northwest Quarter of the Northeast  
Quarter of Section 31, T. 15 N., R. 20 E.,  
M.D.B. & M.

EXCEPTING THEREFROM the South 165 feet of  
the East 100 feet.

g. A 25% interest in that Carson City,  
Nevada, Parcel No. 9-167-07, more  
particularly described as follows:

All that portion of the South half of  
Southwest Quarter of Northwest Quarter of  
Northwest Quarter of Section 32, Township 15  
North, Range 20 East, M.D.B. & M., that lies  
northerly of the State Highway leading to  
Stewart, said Highway right-of-way line more  
particularly described by deed recorded  
January 9, 1919, in Book 43 of Deeds, page  
517, Carson City, Nevada, records.

h. A 50% interest in that Douglas County  
Nevada, Parcel No. 3-150-04-2, more  
particularly described as follows:

A portion of the NE 1/4 of the NW 1/4 of  
Section 34, T. 14 N., R. 18 E., M.D.B. & M.,  
and being more particularly described as  
follows, to-wit:

Beginning at the one-quarter section corner  
common to Sections 36 and 27 of T. 14 N., R.  
18 E., M.D.B. & M.; thence S. 0°28'52" W.,  
along said one-quarter section line, a  
distance of 160.00 feet to the N.E. corner  
of the Rozema property; thence N. 69°42'34"  
W., along the North boundary of the Rozema  
property, a distance of 600.00 feet to the

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Steve, Maid  
& Keith  
January 20, 2009  
Carson City, NV  
Western Title

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WESTERN-TITLE

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This document was scanned by the production staff of Haddan Engineering, Inc. on 12/17/03. The original document is on file in the Haddan Engineering, Inc. records.

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from point of beginning; thence N. 89°42'34" W. along said property line, a distance of 180.00 feet to a point; thence S. 8°17'25" W., a distance of 120.00 feet to a point on the South property line; thence S. 89°42'34" E., along said property line, a distance of 108.80 feet to a point; thence N. 8°17'25" E., a distance of 120.00 feet to the true point of beginning; containing an area of 0.37% of an acre, more or less.

SUBJECT TO a temporary easement reserved by JOE HESHPA for road and utility purposes forty (40) feet in width contiguous with, running along, and parallel to the aforesaid North property boundary. Said temporary easement is to exist during the lifetime of JOE HESHPA or until JOE HESHPA conveys all right, title, and interest in all of his remaining property in said NE 1/4 of the SW 1/4 of Section 16.

ALSO SUBJECT TO a permanent easement reserved by JOE HESHPA, his heirs, executors, and assigns, for roadway and utility purposes, twenty (20) feet in width contiguous with, running along, and parallel to the aforesaid North property boundary.

1. A 50% interest in that Douglas County, Nevada, Parcel Nos. 3-150-05-1 and 3-150-20-9, more particularly described as follows:

PARCEL 1:

All that certain piece or parcel of land situate in the County of Douglas, State of Nevada, that is described as follows:

Beginning at the one-quarter Section corner common to Section 34 and 27, Township 41 North, Range 18 East, M.D.B. & M.; thence South 8°28'51" West, along said one-quarter Section line, a distance of 360.00 feet to a point; thence North 89°42'34" West, along the North boundary of the parcel conveyed to Grantor by Deed recorded in Book V of Deeds, page 103, Douglas County, Nevada, records, &

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WESTERN-TITLE

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distance of 100 feet to the point of beginning; thence continuing North 89°42'34" West, along the North boundary of the parcel so conveyed to Grantor, a distance of 100 feet to a point; thence South 0°17'26" West a distance of 120.00 feet to a point on the South line of the parcel so conveyed to Grantor; thence South 89°42'34" East, along said property line, a distance of 100 feet to a point; thence North 0°17'26" East a distance of 120.00 feet to the point of beginning.

PARCEL 2:

All that certain piece or parcel of land situate in the County of Douglas, State of Nevada, that is described as follows:

Beginning at the one-quarter Section corner common to Sections 34 and 27, Township 14 North, Range 18 East, M.D.B. & N.; thence South 0°28'52" West, along said one-quarter Section line, a distance of 360.00 feet to the point of beginning; thence North 89°42'34" West, along the North boundary line of the parcel conveyed to Grantor by Deed recorded in Book V of Deeds, page 103, Douglas County, Nevada, records, a distance of 100.00 feet to a point; thence South 0°17'26" West a distance of 120.00 feet to a point on the South line of the parcel so conveyed to Grantor; thence South 89°42'34" East, along said property line, a distance of 100 feet to a point on the one-quarter Section line; thence North along said one-quarter Section line East a distance of 120.00 feet to the point of beginning.

PARCEL 3:

All that certain piece or parcel of land situate in the County of Douglas State of Nevada, that is described as follows:

Being a right of way 20' in width, appurtenant to Parcels one and two, as conveyed in the Deeds to Benjamin Johnson, etal, recorded October 13, 1966, in Book 45 of Official Records at page 131 and 137, Douglas County, Nevada.

8

Marvin, B. H. & Co.  
Surveyors  
Carson City, Nevada

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WESTERN-TITLE

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j. A 50% interest in that Lyon County, Nevada, Parcel No. 14-031-03, more particularly described as follows:

PARCEL NO. 1:

The NW 1/4 of the NE 1/4 of Section 8, T. 15 N., R. 23 E., N.D.B. & M.

k. A 50% interest in that Lyon County, Nevada, Parcel No. 14-031-05, more particularly described as follows:

PARCEL NO. 2:

The NE 1/4 of the NE 1/4 of Section 15, T. 15 N., R. 23 E., N.D.B. & M.

l. A 50% interest in that Carson City, Nevada, Parcel No. 2-366-15, more particularly described as follows:

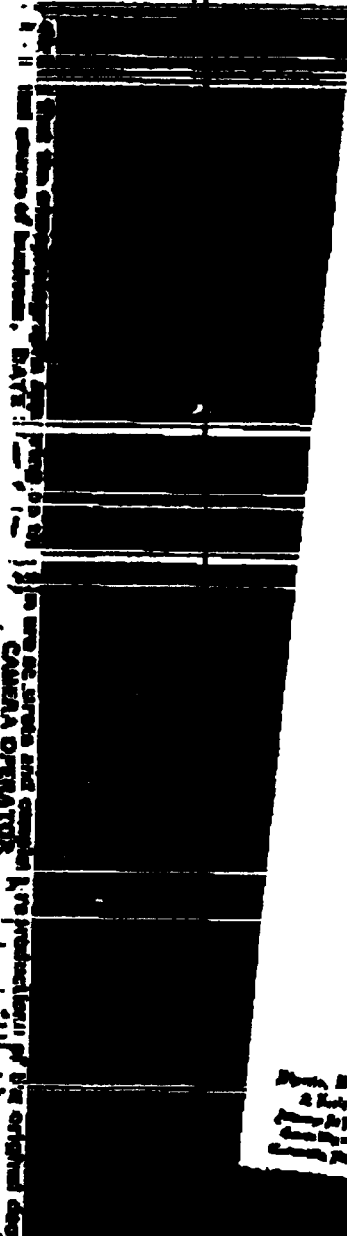
Parcel F-2 as shown on amended Parcel Map filed in the office of the Recorder of Carson City, Nevada, on December 1, 1978, as file No. 84063.

m. A 50% interest in that promissory note executed by Gary Topp and Clementine Topp, dated September 2, 1986, in an original amount of \$185,000.00, together with a 50% interest in the beneficial interest in the deed of trust that secures said note. Said deed of trust was recorded September 4, 1986, as document No. 000-49159, Official Records of Carson City, Nevada, and the real

Shriner, Boley  
& Kirk  
Attorneys at Law  
Carson City, NV  
315 North Nevada

(UU) 55822





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estate that is the subject matter of the deed of trust is located in Carson City, Nevada, and is more particularly described as follows:

A parcel of land located on the Southeastern side of U.S. Highway 50, in the Northwest 1/4 of the Southwest 1/4 of Section 1, Township 13 North, Range 20 East, N.D.B. & M., described as follows:

BEGINNING at a point on the Southeastern right-of-way line of said U.S. Highway 50, 200 feet from the centerline thereof, and from which the West 1/4 corner of said Section 1 bears North 48°34'00" West, 704.89 feet; thence on a curve to the left from a tangent bearing of North 53°11'10" West, with a radius of 5200 feet through an angle of 1°18'12" for a length of 118.26 feet; thence South 33°09'29" East, 375.21 feet; thence South 56°50'40" West, 118.08 feet; thence North 37°09'28" West, 366.27 feet to the point of beginning.

a. A 50% interest in that promissory note executed by Leslie J. Kynett, Jo Anne Kynett, Robert N. Davies, and Vivian B. Davies, dated December 23, 1986, in an original amount of \$285,000.00, together with a 50% interest in the beneficial interest in the deed of trust that secures said note. Said deed of trust was recorded December 23, 1986, as document No. 900-32074, Official Records of Carson City, Nevada, and is more particularly described as follows:

July 31, 2008

# Terracon

Consulting Engineers & Scientists

1360 Greg Street, Suites 111-112  
Sparks, Nevada 89431  
Phone 775.351.2400  
Fax 775.351.2423  
www.terracon.com

Mr. Ben Smith, P.E.  
BSA Development, Inc.  
P.O. Box 291  
Dayton, NV 89403

**Re: GEOTECHNICAL ENGINEERING REPORT  
PROPOSED CITY VIEW GREEN HOMES SUBDIVISION  
(FORMERLY VOLTAIRE CANYON ESTATES)  
CARSON CITY, NEVADA  
TERRACON PROJECT No. 67065033**

Dear Mr. Smith:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical exploration for the proposed Voltaire Estates Subdivision to be located on Voltaire Street in Carson City, Nevada. The purpose of this geotechnical exploration was to obtain information on the subsurface conditions at the proposed project site and, based on this information, to provide recommendations regarding the design and construction of the project foundations.

## **PROJECT INFORMATION**

It is our understanding that the proposed project will consist of the construction of up to eight residential structures. The site consists of two Carson City Assessors Parcel Numbers (APN) including 009-255-01 and 009-253-10. The site is bordered by vacant parcels to the north, east and west, and by a single-family residence to the south. The east side of the property is bordered by Voltaire Street.

## **SITE EXPLORATION PROCEDURES**

The proposed project site was explored on November 11, 2006 by excavating a total of five test pits and a single fault investigation trench with a Bobcat 337 Mini Track Hoe. Terracon field staff established the test pit locations in the field by taping from the available reference features. The test pit locations should be considered accurate only to the degree implied by the methods used to define them.

An engineering geologist classified the site soils in the field in general accordance with ASTM D2488. The locations of the test pits are shown on Plate 1 (Plot Plan). Logs of the test pits are included as Plate 2 (Test Pit Logs), and a Unified Soil Classification System Chart has been included as Plate 3 (Graphic Soils Classification Chart).

Representative samples of native soils were taken from the test pits and returned to our Sparks, Nevada, laboratory, and classifications were confirmed or revised based on laboratory testing of selected samples. The descriptions of the soils indicated on the test pit logs are in accordance with the enclosed General Notes and the Unified Soil Classification System (USCS). Classification in this manner provides indications of soil properties and can be correlated to other properties using published charts (Bowles, 1995). Estimated group symbols according to the USCS are given on the boring and test pit logs, and a brief description of the USCS classification system is shown in **Appendix C**.

### **General Geologic and Soil/Bedrock Conditions**

As presented on the boring logs, the subsurface soils encountered at the site generally consist of silty sand to the maximum depths explored. Detailed subsurface conditions at each test pit are shown on the logs in **Appendix A**.

A fault is mapped by the Nevada Bureau of Mines and Geology as crossing the site near the western edge. Through inconclusive fault trenching the mapped fault is deemed insignificant to the proposed project.

Soils testing performed by Terracon was conducted in general accordance with the American Society for Testing and Materials (ASTM) standards where applicable. Representative samples of major material types were tested to determine their grain size distribution, plasticity index (PI) or Atterberg Limits, and moisture content. Such testing is typically referred to as index testing. Results of the index tests were used to confirm or modify field visual soil classifications as needed on the final boring logs. Based on index testing, geotechnical design parameters were estimated. The laboratory test results are presented in **Appendix B**.

Soluble sulfate testing (EPA Method 300.0) was performed on a representative sample of the subgrade soil. The results of the tests were used to determine the reactive potential of concrete in contact with the native soils. Chemical testing was performed by Western Environmental Testing Laboratory (WETLab) of Sparks, Nevada.

The results of the soluble sulfate testing indicate moderate sulfate exposure. These results are shown in **Appendix B**. Based on the test results, concrete in contact with native soils should meet the minimum requirements presented in table 1904.3 of the 2003 *International Building Code (IBC)*.

The site appears suitable for the proposed construction based on geotechnical conditions encountered in the exploratory borings.

The subject site is located in northwestern Nevada, which is a seismically active area within the Basin and Range area. The type and magnitude of seismic hazards affecting the site are

dependent on the distance to causative faults, and on the intensity and the magnitude of the seismic event.

In order to estimate the seismic design parameters at the subject site, Terracon utilized the USGS *Earthquake Ground Motion Parameters v5.0.7* software (USGS, 2005) in general accordance with the 2003 *International Building Code (IBC)*. According to this source, the mapped short and 1 second period spectral accelerations (SA) at the subject site are shown in Table 1.

<b>Parameter</b>	<b>Value</b>
Mapped Short Period Spectral Acceleration ( $S_s$ )	1.729
Mapped 1-second Period Spectral Acceleration ( $S_1$ )	0.696
Site Coefficient ( $F_a$ ) [IBC 2003 Table 1615.1.2(1)] <sup>1</sup>	1
Site Coefficient ( $F_v$ ) [IBC 2003 Table 1615.1.2(2)] <sup>1</sup>	1.5

Note <sup>1</sup> – Based on straight-line interpolation for intermediate values and Site Class per IBC 2003.

Based on the results of our site exploration, and Table 1615.1.5 of the 2003 *IBC*, we recommend a Site Class “D” be used in design of this project. This site class definition corresponds to a *Stiff Soil* profile.

Conventional shallow foundations, such as spread footings, are appropriate for supporting the proposed structure at this site. Spread footings should be embedded a minimum of 24 inches below the nearest adjacent grade for frost protection and should bear on a minimum of 36 inches of properly compacted structural fill. Spread footings bearing on a minimum of 36 inches of properly compacted granular structural fill can be designed for a maximum net allowable soil bearing pressure of 2,500 pounds per square foot (psf) (assuming a minimum embedment depth of 24 inches). The net allowable soil bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation.

The magnitude of settlement that will occur beneath the foundations depends upon factors that include variations within the subsurface soil profile, the actual structural loading conditions, the embedment depth of the footings, the actual thickness of compacted fill, and construction quality control. Assuming that spread footing construction is performed in accordance with our recommendations, it is our opinion that total settlement will be on the order of approximately 1 inch. Differential settlement up to approximately ½ to ⅔ of the total settlement value should be anticipated.

Structural fill material should meet the parameters outlined in Table 2 below.

<b>Table 2 – Guidelines for Structural Fill (ASTM C136)</b>	
<b>Sieve Size</b>	<b>Percent Passing</b>
4-Inch	100
¾-Inch	70 - 100
No. 40	15 - 65
No. 200	5 - 20
<b>Maximum Allowable Liquid Limit and Plasticity Index (ASTM D4318)</b>	
Liquid Limit (LL)	35 max
Plasticity Index (PI)	10 max
<b>Minimum Allowable R-Value (ASTM D2844)</b>	
R-Value	45 min
<b>Maximum Allowable Soluble Sulfates (EPA 300)</b>	
Sulfates	< 0.1% by Weight SO <sub>4</sub>

Materials that deviate from these guidelines must be approved by the geotechnical engineer prior to use.

Areas to receive fill should be scarified to a minimum depth of 6-inches, moisture conditioned, and compacted to a minimum of 90 percent relative compaction (ASTM D1557). Areas that are unstable or pumping should be stabilized to a firm and non-yielding condition prior to receiving fill.

Structural fill should be placed in loose lifts not exceeding 8 inches in thickness and thoroughly compacted to a minimum of 95 percent relative compaction (ASTM D1557). The moisture content of structural fill at the time of compaction should be within 2 percent of the soil's optimum moisture content as determined by the modified Proctor test (ASTM D1557).

#### **GENERAL COMMENTS AND CLOSING**

Terracon Consultants, Inc. (Terracon) should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon also should be retained to provide testing and observation during excavation, grading, foundation and construction phases of the project to ensure conformance to the design recommendations presented herein.

The analysis and recommendations presented in this report are based on the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings across the site, or due to the modifying effects of weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be

PROPOSED CITY VIEW GREEN HOMES SUBDIVISION  
Carson City, Nevada  
Terracon Project No.: 67065033  
January 14, 2009

**Terracon**

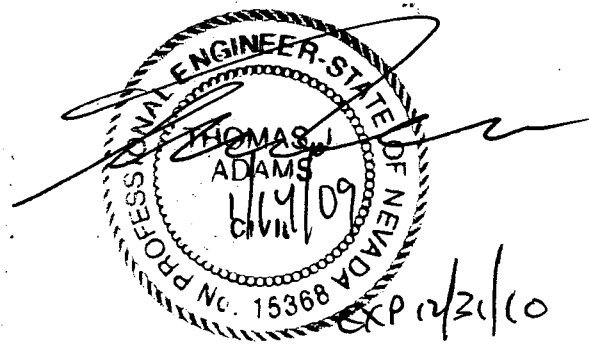
immediately notified so that further evaluation and supplemental recommendations can be provided.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either expressed or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

We appreciate being of service to you in the geotechnical engineering phase of this project, and are prepared to assist you during the construction phases as well. If you have any questions concerning this report or any of our testing, inspection, design and consulting services, please do not hesitate to contact us.

Sincerely,  
**Terracon Consultants, Inc.**

  
Gretchen C. Schmauder, M.S., G.I.T.  
Geotechnical Staff Professional

  
Thomas J. Adams, P.E.  
Office Manager

**APPENDIX A**  
Test Pit Logs

**APPENDIX B**  
Grain-Size Distribution Test Results  
Atterberg Limit Test Results  
Chemical Testing Results (WETLabs)

**APPENDIX C**  
USCS Classification System  
General Notes

Copies to: Addressee (5)

GCS/TJA

PROPOSED CITY VIEW GREEN HOMES SUBDIVISION  
Carson City, Nevada  
Terracon Project No.: 67065033  
January 14, 2009

Terracon

## REFERENCES

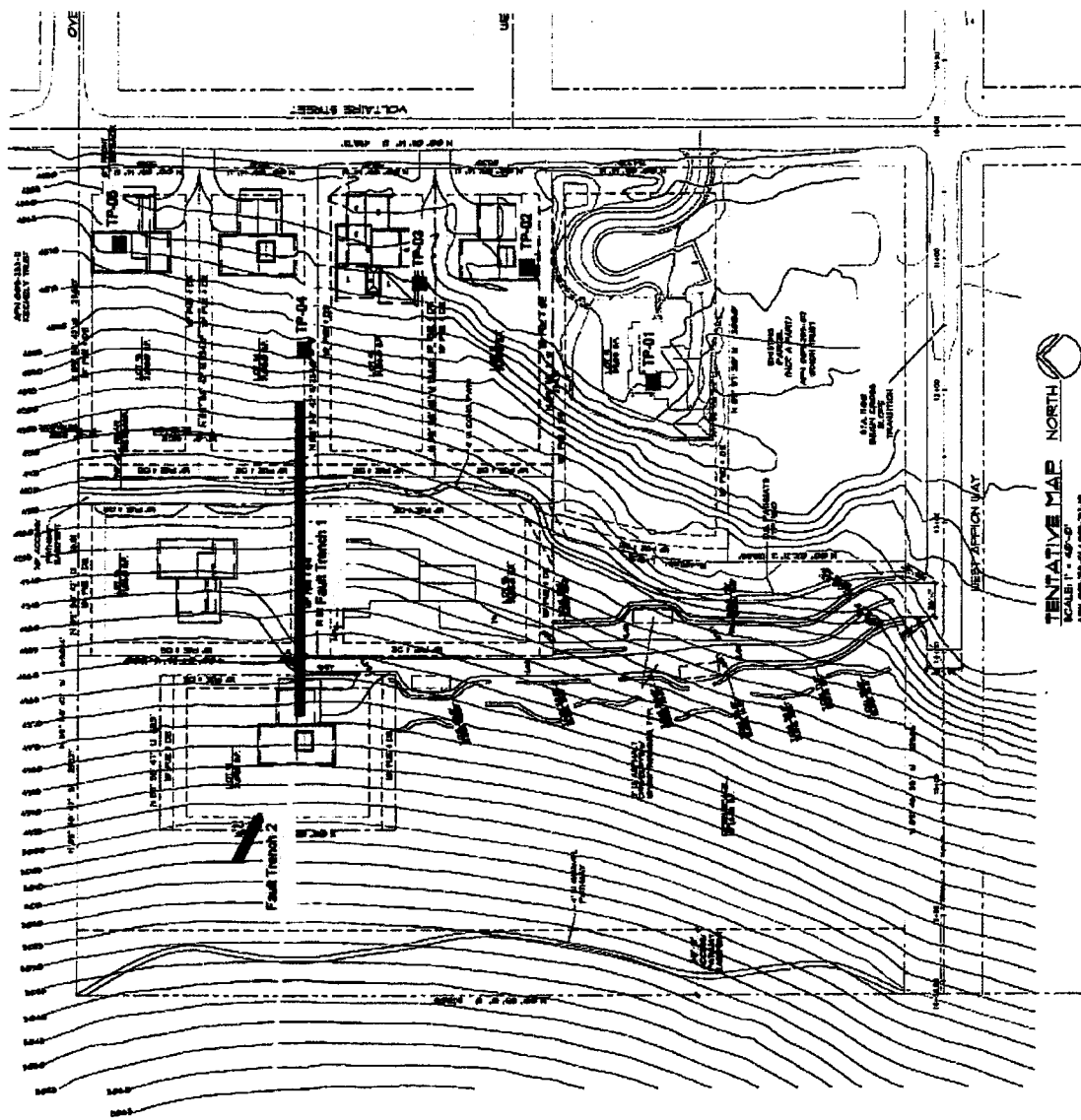
Bowles, J. E., 1995, *Foundation Analysis and Design*: 5<sup>th</sup> edition, Mc-Graw Hill, New York, New York.

International Code Council (ICC), 2003, *International Building Code (IBC)*.

U. S. Geological Survey (USGS), 2005, *The Top Earthquake States – Earthquakes, Magnitude 3.5 and Greater, 1974-2003*,

URL: [http://neic.usgs.gov/neis/states/top\\_states.html](http://neic.usgs.gov/neis/states/top_states.html).

American Society for Testing and Materials (ASTM), 2005, *Soil and Rock; Dimension Stone; Geosynthetics*, Volume 4.08.



TENTATIVE MAP NORTH  
 SCALE: 1" = 40'-0"  
 DATE: 08/20/08  
 DRAWN BY: [illegible]  
 CHECKED BY: [illegible]  
 PROJECT: [illegible]



# LOG OF TEST PIT NO. TP-01

CLIENT <p style="text-align: center;"><b>BSA Development, Inc.</b></p>	
SITE <p style="text-align: center;"><b>Carson City, Nevada</b></p>	PROJECT <p style="text-align: center;"><b>City View Green Homes Subdivision</b></p>

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
4.5	<p><b>SILTY SAND</b> Yellowish brown, dry, dense, with estimated non-plastic fines, fine to coarse sand and fine gravel. Unit is cemented with mud down to approximately 3 feet.</p>	4.5	SM	1 GRAB					
5	<p><b>SILTY SAND</b> Yellowish brown, moist, medium dense, with estimated non-plastic fines, fine to coarse sand and fine gravel.</p>	5	SM	2 GRAB					
10	<p>Bottom of test pit.</p>	10							

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft	
WL	NE
▼	▼
WL	▼
WL	▼



BORING STARTED	10-6-06
BORING COMPLETED	10-6-06
Borecat 337 Mini Ex	FOREMAN SDB
APPROVED	JOB # 67065033

BOREHOLE 89 67065033 LOGS.GPJ TERRACON.GDT 1/14/2009

# LOG OF TEST PIT NO. TP-02

CLIENT **BSA Development, Inc.**

SITE **Carson City, Nevada** PROJECT **City View Green Homes Subdivision**

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
				NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
4	<b>SAND with SILT</b> Yellowish brown, dry, loose, with estimated non-plastic fines, fine to coarse sand and fine gravel.		SP SM	1	GRAB					
5	<b>SILTY SAND</b> Yellowish brown, moist, medium dense, with estimated non-plastic fines, fine to coarse sand and fine gravel.		SM	2	GRAB					
10	Bottom of test pit.									

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft		
WL	▽ NE	▽
WL	▽	▽
WL		



BORING STARTED	10-6-06
BORING COMPLETED	10-6-06
Bobcat 337 Mini Ex	FOREMAN SDB
APPROVED	JOB # 67065033

BOREHOLE 99 67065033 LOGS.GPJ TERRACON.GDT 1/14/2009

# LOG OF TEST PIT NO. TP-03

CLIENT **BSA Development, Inc.**

SITE **Carson City, Nevada** PROJECT **City View Green Homes Subdivision**

GRAPHIC LOG	DESCRIPTION	DEPTH, ft	USCS SYMBOL	SAMPLES				TESTS		
				NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
6	<b>SILTY SAND</b> Yellowish brown, dry, loose, with estimated non-plastic fines, fine to coarse sand and fine gravel.	5	SM	1	GRAB					
9	<b>SILTY SAND</b> Yellowish brown, moist, medium dense, with estimated non-plastic fines, fine to coarse sand and fine gravel. Unit is cemented but breaks up easily with excavation.	5	SM	2	GRAB					
10	<b>SILTY SAND</b> Yellowish brown, moist, medium dense to dense, with estimated non-plastic fines, fine to coarse sand and fine gravel.	10	SM	3	GRAB					

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

**WATER LEVEL OBSERVATIONS, ft**


WL	▽ NE	▽
WL	▽	▽
WL		



BORING STARTED	10-6-06
BORING COMPLETED	10-6-06
By cat 337 Mini Ex	FOREMAN SDB
APPROVED	JOB # 67065033

BOREHOLE 99 67065033 LOGS.GPJ TERRACON.GDT 1/14/2009

# LOG OF TEST PIT NO. TP-04

CLIENT <b>BSA Development, Inc.</b>									
SITE <b>Carson City, Nevada</b>		PROJECT <b>City View Green Homes Subdivision</b>							
GRAPHIC LOG	DESCRIPTION	DEPTH, ft	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft	WATER CONTENT, %	DRY UNIT WT pcf
	<p><b>SILTY SAND</b> Yellowish brown, dry, dense, with estimated non-plastic fines, fine to coarse sand and fine gravel. Sand is cemented to depth.</p>	10 5 0	SM	1 GRAB					
	Bottom of boring.	10							

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

**WATER LEVEL OBSERVATIONS, ft**

WL	▽ NE	▽
WL	▽	▽
WL		



BORING STARTED	10-6-06
BORING COMPLETED	10-6-06
Borecat 337 Mini Ex	FOREMAN SDB
APPROVED	JOB # 67065033

BOREHOLE 99 67065033 LOGS.GPJ TERRACON.GDT 1/14/2009

# LOG OF TEST PIT NO. TP-05

CLIENT <b>BSA Development, Inc.</b>										
SITE <b>Carson City, Nevada</b>		PROJECT <b>City View Green Homes Subdivision</b>								
GRAPHIC LOG	DESCRIPTION	DEPTH, ft	SAMPLES				TESTS			
			USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
7.5	<b>SILTY SAND</b> Yellowish brown, dry, loose, with estimated non-plastic fines, fine to coarse sand and fine gravel. Unit is cemented to 4 feet.	5	SM	1	GRAB					
10	<b>SILTY SAND</b> Yellowish brown, moist, medium dense, with estimated non-plastic fines, fine to coarse sand and fine gravel.	10	SM	2	GRAB					
	Bottom of test pit.									

BOREHOLE 99 67065033 LOGS.GPJ TERRACON.GDT 11/14/2009

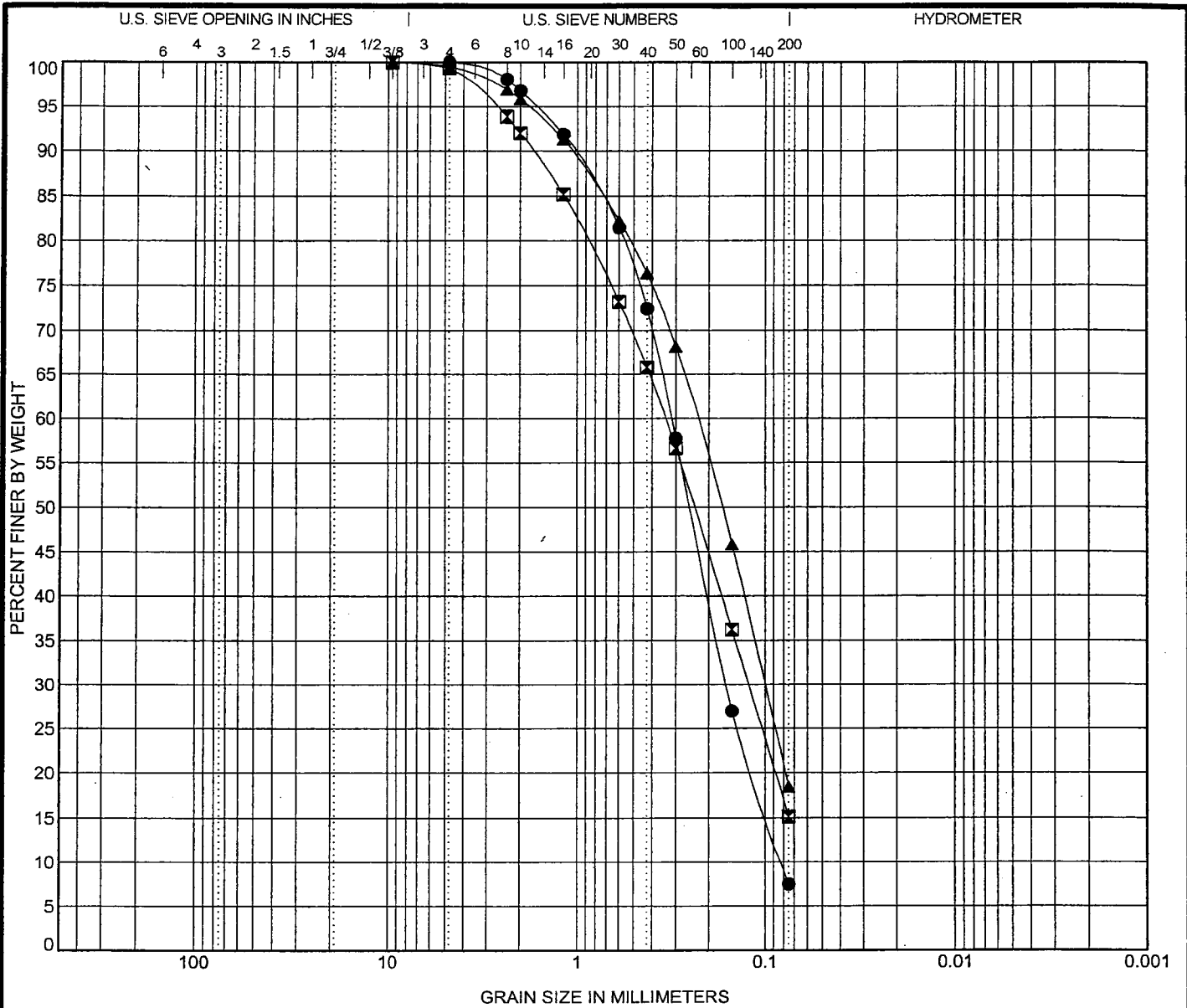
The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

**WATER LEVEL OBSERVATIONS, ft**

WL	▽	NE	▽
WL	▽		▽
WL			



BORING STARTED		10-6-06	
BORING COMPLETED		10-6-06	
Cat 337 Mini Ex	FOREMAN	SDB	
APPROVED	JOB #	67065033	



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● TP-2 0.5ft	POORLY GRADED SAND with SILT (SP-SM)	NP	NP	NP	0.99	3.86
☒ TP-3 6.0ft	SILTY SAND (SM)	NP	NP	NP		
▲ TP-5 2.5ft	SILTY SAND (SM)	NP	NP	NP		

Specimen Identification	D100	D60	D30	D10	%MC	%Gravel	%Sand	%Silt	%Clay
● TP-2 0.5ft	4.75	0.316	0.161	0.082	1	0.0	92.5	7.5	
☒ TP-3 6.0ft	9.5	0.341	0.122			0.7	84.2	15.1	
▲ TP-5 2.5ft	9.5	0.233	0.1			0.5	81.1	18.4	

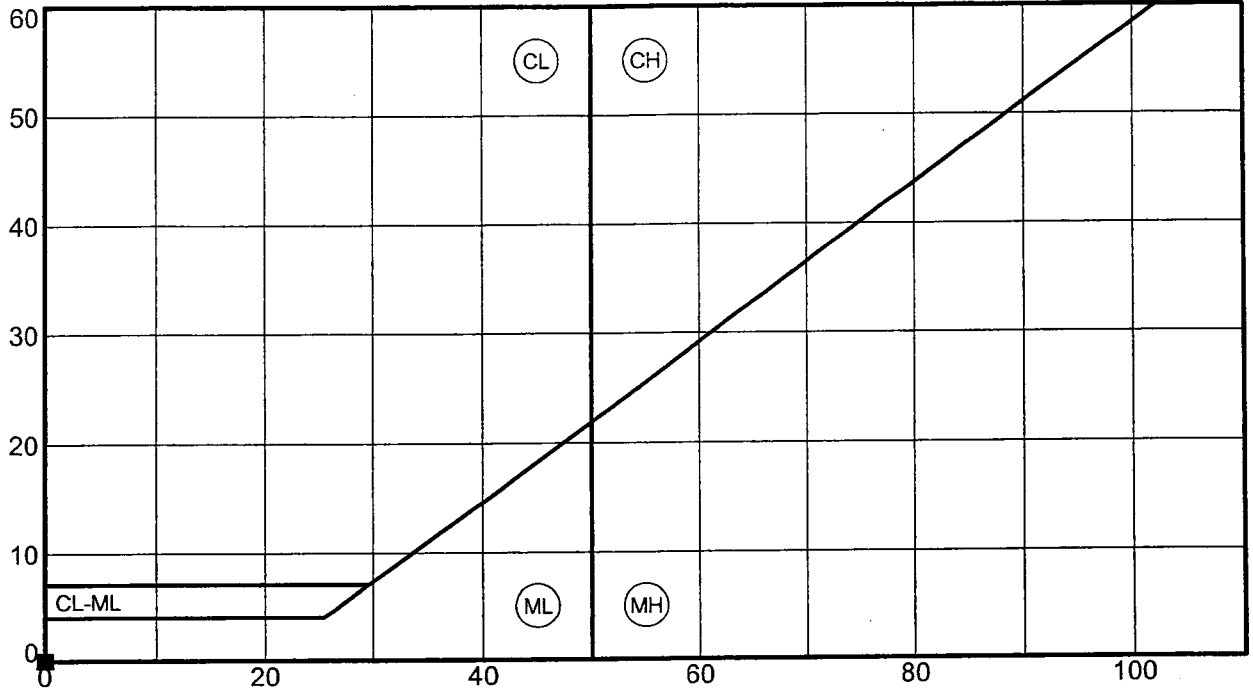
**GRAIN SIZE DISTRIBUTION**



Project: City View Green Homes Subdivision  
 Site: Carson City, Nevada  
 Job #: 67065033  
 Date: 1/14/2009

TC GRAIN SIZE 67065033 LAB RESULTS.GPJ TERRACON.GDT 1/14/2009

PLASTICITY INDEX



LIQUID LIMIT

Specimen Identification	LL	PL	PI	%Fines	Classification	
● TP-2	0.5ft	NP	NP	NP	7	POORLY GRADED SAND with SILT (SP-SM)
☒ TP-3	6.0ft	NP	NP	NP	15	SILTY SAND (SM)
▲ TP-5	2.5ft	NP	NP	NP	18	SILTY SAND (SM)

TC ATTERBERG LIMITS 67065033 LAB RESULTS.GPJ TERRACON.GDT 1/14/2009



**ATTERBERG LIMITS RESULTS**

Project: City View Green Homes Subdivision  
 Site: Carson City, Nevada  
 Job #: 67065033  
 Date: 1/14/2009

# Western Environmental Testing Laboratory Analytical Report


Terracon  
1380 Greg St., Suite 111 & 112  
Sparks, NV 89431  
Attn: David Whalen

EPA Lab ID: NV004  
Received: 11/30/06  
Lab Sample ID: 611-221  
Reported: 12/04/06

Phone: 351-2400 Fax: 351-2423

Project Name/Number: Voltaire Canyon Estates / 67065033  
Sample ID: 06-1140  
Sample Location: TB-2 @ 0.5 ft.  
Date/Time Collected: Not Specified  
Sampled By: Client

Parameter	Method	Results	Units	Analyzed
Soluble Sulfate	300.0	270	mg/kg	12/01/06

  
Andy Smith, Lab Manager



# GENERAL NOTES

## DRILLING & SAMPLING SYMBOLS:

- SS: Split Spoon - 1-3/8" I.D., 2" O.D., unless otherwise noted  
 ST: Thin-Walled Tube - 2" O.D., unless otherwise noted  
 RS: Ring Sampler - 2.42" I.D., 3" O.D., unless otherwise noted  
 DB: Diamond Bit Coring - 4", N, B  
 BS: Bulk Sample or Auger Sample

- HS: Hollow Stem Auger  
 PA: Power Auger  
 HA: Hand Auger  
 RB: Rock Bit  
 WB: Wash Boring or Mud Rotary

The number of blows required to advance a standard 2-inch O.D. split-spoon sampler (SS) the last 12 inches of the total 18-inch penetration with a 140-pound hammer falling 30 inches is considered the "Standard Penetration" or "N-value".

## WATER LEVEL MEASUREMENT SYMBOLS:

- WL: Water Level  
 WCI: Wet Cave in  
 DCI: Dry Cave in  
 AB: After Boring
- WS: While Sampling  
 WD: While Drilling  
 BCR: Before Casing Removal  
 ACR: After Casing Removal

N/E: Not Encountered

Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. Groundwater levels at other times and other locations across the site could vary. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of groundwater levels may not be possible with only short-term observations.

**DESCRIPTIVE SOIL CLASSIFICATION:** Soil classification is based on the Unified Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

### CONSISTENCY OF FINE-GRAINED SOILS

Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-value (SS) Blows/Ft.	Consistency
< 500	0 - 1	Very Soft
500 - 1,000	2 - 4	Soft
1,000 - 2,000	4 - 8	Medium Stiff
2,000 - 4,000	8 - 15	Stiff
4,000 - 8,000	15 - 30	Very Stiff
8,000+	> 30	Hard

### RELATIVE DENSITY OF COARSE-GRAINED SOILS

Standard Penetration or N-value (SS) Blows/Ft.	Relative Density
0 - 3	Very Loose
4 - 9	Loose
10 - 29	Medium Dense
30 - 49	Dense
> 50	Very Dense

### RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

### GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300mm)
Cobbles	12 in. to 3 in. (300mm to 75 mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 Sieve (0.075mm)

### RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifiers	> 12

### PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1-10
Medium	11-30
High	> 30

# Terracon

# UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests<sup>A</sup>

				Soil Classification	
				Group Symbol	Group Name <sup>B</sup>
Coarse Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines <sup>C</sup>	$Cu \geq 4$ and $1 \leq Cc \leq 3^E$	GW	Well-graded gravel <sup>F</sup>
		Gravels with Fines More than 12% fines <sup>C</sup>	Fines classify as ML or MH	GP	Poorly graded gravel <sup>F</sup>
		Sands 50% or more of coarse fraction passes No. 4 sieve	Fines classify as CL or CH	GM	Silty gravel <sup>F,G,H</sup>
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines <sup>D</sup>	$Cu \geq 6$ and $1 \leq Cc \leq 3^E$	GC	Clayey gravel <sup>F,G,H</sup>
		Sands with Fines More than 12% fines <sup>D</sup>	$Cu < 6$ and/or $1 > Cc > 3^E$	SW	Well-graded sand <sup>I</sup>
		Sands with Fines More than 12% fines <sup>D</sup>	Fines classify as ML or MH	SP	Poorly graded sand <sup>I</sup>
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silt and Clays Liquid limit less than 50	inorganic	$PI > 7$ and plots on or above "A" line <sup>J</sup>	CL	Lean clay <sup>K,L,M</sup>
		organic	$PI < 4$ or plots below "A" line <sup>J</sup>	ML	Silt <sup>K,L,M</sup>
		inorganic	Liquid limit - oven dried < 0.75	OL	Organic clay <sup>K,L,M,N</sup>
		organic	Liquid limit - not dried < 0.75	OH	Organic silt <sup>K,L,M,O</sup>
		inorganic	$PI$ plots on or above "A" line	CH	Fat clay <sup>K,L,M</sup>
	Silt and Clays Liquid limit 50 or more	inorganic	$PI$ plots below "A" line	MH	Elastic Silt <sup>K,L,M</sup>
		organic	Liquid limit - oven dried < 0.75	OH	Organic clay <sup>K,L,M,P</sup>
		organic	Liquid limit - not dried < 0.75	OH	Organic silt <sup>K,L,M,O</sup>
		Primarily organic matter, dark in color, and organic odor		PT	Peat
		Highly organic soils			

<sup>A</sup> Based on the material passing the 3-in. (75-mm) sieve

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$^E C_u = D_{60}/D_{10} \quad C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

<sup>F</sup> If soil contains  $\geq 15\%$  sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly sand, add "sandy" to group name.

<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200, predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup>  $PI$  plots on or above "A" line.

<sup>Q</sup>  $PI$  plots below "A" line.

